

लाल बहादुर शास्त्री प्रशासन अकादमी
Lal Bahadur Shastri Academy of Administration

मुसूरी
MUSSOORIE

पुस्तकालय
LIBRARY

111377

अवाप्ति संख्या

Accession No. ~~5623~~

वर्ग संख्या

Class No. 746.1

पुस्तक संख्या

Book No. 847

HAND-SPINNING AND HAND-WEAVING

AN ESSAY



Re. 1

PUBLISHED BY
THE ALL INDIA SPINNERS' ASSOCIATION,
AHMEDABAD

HAND-SPINNING AND HAND-WEAVING

HAND-SPINNING AND HAND-WEAVING

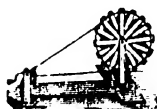
An Essay

By

S. V. PUNTAMBekar,

and

N. S. VARADACHari



PUBLISHED BY
THE ALL INDIA SPINNERS' ASSOCIATION,
AHMEDABAD.

Printed by S. Ganesan,
at the Current Thought Press,
Triplicane, Madras

INTRODUCTION

It will be remembered that early last year Sjt. Reva Shanker Jagjivan Mehta, the Joint Treasurer of the National Congress, announced a prize of Rs. 1000 for the best essay on spinning. The judges appointed were Sjts. Ambalal Sarabhai, Shankerlal Banker, Maganlal Gandhi and myself. Sixty eight essays were received. After much deliberation, the judges decided to distribute the prize between Professor S. V. Puntambekar at present of the Benares Hindu University and Sjt. N. S. Varadachari. The essay that is now being presented to the public is the result of the joint effort of these two winners who were requested to amalgamate their essays and give a joint production. It is difficult to say how far the effort is an improvement upon the originals. But workers in the vast field of hand-spinning will find ample material in the following pages to strengthen their position and I should be much surprised if the sceptic does not find enough food for reflection.

The authors have applied themselves to an examination principally of the following propositions :—

Are there millions in India who require a supplementary occupation, the majority be-

ing idle for want of it during at least 4 months in the year?

Is hand-spinning the only supplementary occupation and if it is, can it be easily taken up by the people?

Is it possible to sell Khaddar woven from hand-spun yarn among the people in the teeth of the competition offered by foreign and Indian mills?

The reader will find that the authors have endeavoured to give an affirmative answer to all these important questions. Is it not the duty of every one who wants to see an amelioration in the condition of India's masses carefully to read what the authors have stated and to support the Khaddar movement if they accept their conclusions? Let them denounce it as a waste of effort, if they can dare controvert the facts adduced by the authors.

SABARMATI,	}	M. K. GANDHI
<i>November 16, 1926.</i>		

CONTENTS

Chapter.	Page.
I. History of Hand-spinning and Hand-weaving in India before the Advent of the British ...	1
II. Ruin of Hand-spinning and Hand-weaving ...	43
III. The Possibilities of Hand-spinning and Hand-weaving and a Comparison with the Mill Industry of India	122
IV. Boycott of Foreign Cloth through the Spinning Wheel Discussed	218

CHAPTER I

HISTORY OF HAND-SPINNING AND HAND-WEAVING IN INDIA BEFORE THE ADVENT OF THE BRITISH

It is often said, superficially, that the life of India's millions in the villages has hardly changed its course during centuries, while the truth seems to be that a prosperous, industrious and contented nation plying busy trades and endowed with an extraordinary genius for art and craftsmanship has been transformed almost imperceptibly, under the influence of some fierce and mighty curse as it were, into a race ground down by misery, experiencing periods of enforced idleness for want of honest occupation and striving in vain to lift its head amidst growing indebtedness and poverty. The change has been so vast and so striking that though the modern Indian village retains

Intro-
ductory.

2 HAND SPINNING AND HAND WEAVING

an outward appearance of placidity and calm, there is no trace of the ancient and unique, self-sufficient and self-reliant village community to be seen there any longer. Its inhabitants who once had enjoyed the fruits of an extensive and magnificent commerce have today lost their cherished inheritance of ancient occupations and are forced to eat the bread of dependence. The village folk are now for the most part mere growers and exporters of raw produce. Their homes have ceased to be the busy hive of industrial pursuits. For years, even after the coming of the British, the village was still the centre of flourishing arts and crafts, chief among which were the cottage industries of spinning and weaving. Two centuries ago, there would have been no need to recount to the people the history of what was with them an universal occupation, the familiar work of the home, man, woman and child knowing and practising it. But the old threads have snapped and it is now left to us to piece them together, by reviving the forgotten art and helping fumbling fingers to recover their lost cunning and ply the wheel with as much dexterity and happiness as they did before.

The history of spinning and weaving goes far into remote antiquity and it is difficult to render it from the earliest times into anything like a con-

tinuous narrative. Spinning and weaving are as old as the Vedas. In fact, the weaver like the vedantin was the first superb product of Hindu genius. The Brahma Sutras of the one and the Karpasa Sutras of the other furnished the material out of which the almost perfect system of Brahman philosophy and the finest fabrics of cotton were fashioned and woven. When Egypt built her massive pyramids and Babylon's king Hammurabi wrote his great Code, India was already set on this unique path. The vedantin, the तत्त्ववाय (the weaver of the eternal verities), clothed the nescience of man's soul, while the weaver, the तन्तुवाय (weaver of cotton threads), clothed the nakedness of man's body. The story of India's golden age and of her immortal civilization is summed up in the lives of these two, the vedantin, the true seer, and the weaver, the real artist. We now turn to the history of the latter whose creative genius constituted the bedrock upon which the trade and art of India were built up.

It is just possible that weaving may have even preceded spinning and that the first weaving itself was not of cloth. The evolution of weaving takes us back to the dawn of civilization but the fact remains that man made this invention in almost its final stage. The wonderful discovery of laying the yarn in warp and ply-

Weaving in
the Vedas.

4 HAND SPINNING AND HAND WEAVING

ing the woof through, together with the arrangement to pull alternate warp threads, has not been improved upon these thousands of years. We read of the fathers 'who wove and placed the warp and the woof' in the Rigveda (X. 30). So deep was the impress this delicate art had left on the minds of the Rishis that they thought the weaving metaphor was best suited to typify Eternal Truth and Mystery. The Rigveda is full of facile allusions to the art of weaving. "Night and day interweave in concert like two female weavers the extended thread to complete the web of sacrifice." (Wilson's Rigveda II, p. 228). The sacrifice of Prajapati out of which all creation proceeded is rendered in the Rigveda in terms of spinning and weaving. Weaving during the vedic period was one of the domestic duties. It must have been a familiar experience to have found threads eaten by rats at night and the Rigveda has a reference to this in a passage where it is said, "As rats eat weavers' threads, cares are consuming me." (X. 33. 3). Apart from the familiarity with which weaving was regarded, the skill required in weaving must have been strikingly felt. In passages like, "Ye weave your songs as skilful men weave garments." (Rigveda X. 106. 1), "they the refulgent sages weave within the sky, aye in the depths of the sea a web for ever anew"

(Rigveda I. 149. 4) this fact is brought out forcibly.

The spinning metaphor is in constant evidence in all the Vedas, Upanishads and other sacred literature.

Here are a few typical citations which show the part played by spinning in the lives of our ancestors. Spinning was no doubt the commonest art, but was still regarded as a sacrament. The God of Gods, Vishnu Himself, is known as **सुतन्तु । तन्तुवर्धन**. When the poet sings his invocation to Agni, he asks of the Gods "to spin out the ancient thread." The continuity of life itself and of the human race is compared to the continuity of a well-spun thread. "As fathers they have set their heritage on earth, their offspring, as a thread continuously spun out" (**तन्तुमाततं** Rigveda X. 56.6). A triply twisted thread is referred to in one passage which runs as follows : "He that hath assumed the rays of Surya for his robe, spinning as he knows how the triply twisted thread (**तन्तु तन्वानः भिवृत् ***),

* The following technical words found in the Vedas would be of interest :

ओतु denotes the woof in weaving and corresponds to **तन्तु** warp, **वा** (to weave) and **तन्** (to stretch) are the roots from which these two terms are derived. **प्रवय** Weave forth; **अपवय** weave back; **तसर** a shuttle; **वेमन्** a loom; **वाय** a weaver; **मथूख** a wooden peg which was used to stretch the web on, while lead was employed as a weight to

6 HAND SPINNING AND HAND WEAVING

i.e., bearing his part in the morning, noon, and evening sacrifice." (Rigveda IX. 86. 32). That the common people practised spinning and weaving universally may be gathered from the fact, reference to which is made in the Atharvaveda, that the young husband wore on the first day of the marriage the garment made by his wife. This custom is curiously enough still prevalent in the district of Sambalpur in Orissa and in parts of Assam where the young bride is for the first year of her stay at the husband's home given no other work but spinning. It is probably again a relic of this old tradition that is still to be found in the present day marriage ceremony when it is symbolically conveyed to the bridegroom who is received with the yoke, the pestle, the churning-rod and the spindle, that these four are the props of domestic happiness and contentment. During the Vedic times as even now spinning for the home supplied one of the prime needs of life, and young and old had to practise the art. The Brahman spun his own sacred thread then, as he does even now. No one, not even the highest, was exempted from the obligation to spin.

extend it; तर्कु a spindle; सिन्धु a border of garments; सीरी a weaver; रजयित्री a female dyer; द्रापी a mantle; पांडव an uncoloured garment; परिधान a garment; अधिवासम् mantle; पेशस् an embroidered garment.

The men and women of the Vedic and Epic ages had developed the sartorial art to a considerable extent.

Vedic Dress
in its many
Forms.

The men put on three garments,--- an under garment called नीवी, an upper garment परिधान or अधिवासस् and another cloth वस्त्र. A turban उष्णीष was also in use (Atharvaveda XIII. 2. 16. IX. 10. 7). The Taittiriya Brahmana (III. 676) mentions a cloth of gold. The Maruts are described in the Vedas as putting on garments adorned with gold. (Rigveda V. 55. 6) "Robed in garments fair as heavens to look on" occurs in one of the hymns of the Rigveda - a certain indication that cloth of surpassing beauty and the most delicate texture was known even in the Vedic age. The fine dhoties of the rich were called प्रावार ; on the body was put on

उत्तरीय, on the head उष्णीष. The women had two clothes उत्तरीय to cover the body and अन्तरीय to be taken over the head. It is evident that in the epic period silken, wollen and cotton stuffs of various kinds were abundant and in extensive use. According to Valmiki the splendid trousseau of Sita consisted of woollen stuffs, furs, precious stones, fine silks, vestments of diverse colours, princely ornaments and sumptuous carriages of every kind. (Balakanda, I. 743). The Mahabharata mentions (Sabha Parva 51 and 52) amongst the presents brought to Yudhishtira from

various parts of India cloths made of wool and embroidered with gold (being in fact shawls and brocades) and blankets of various manufacture presented by the Abhiras of Gujarat, and cloths of various kinds of wool, or threads spun by worms (silk) or of patta vegetable fibres or hemplinen and fine muslin by the people of Karnatak and Mysore. The Pandyas and Cholas are mentioned as having brought fine cotton cloth embroidered with gold. Here is ample evidence to show that the textile industry was well advanced and carried to perfection even in those ancient times.

Spinning as also weaving was essentially a domestic occupation and was almost universal in the country. It was the duty of the housewife then as it is even today in some parts of Assam to spin and to weave. Vatsyayana only recorded the custom prevalent through centuries when he laid down spinning and weaving as two of the essential duties of the home which the wife had to perform. (कार्पासस्य सूत्रकरणं । सूत्रस्य वानं आच्छादनार्थं; Bharyadhikarana in Vatsyayana's Kamasutras pp. 238 & 239). Though weaving too was a house-hold duty, it is not to be assumed that a separate class of weavers was not then existent. In truth weaving had become a whole-time occupation even from the very com-

Organiza-
tion for
Weaving
and
Spinning.

mencement of communal village life and the weavers were found, as were also the dyers, highly organised even during the period of the later Samhitas and Brahmanas. Crafts and commerce flourished corporately and locally under conditions of individual and corporate competition, the leaders of the guilds being the friends and counsellors of Kings (vide Cambridge History of India, Vol. I. p. 219). There were weavers' organisations in South India so rich and trustworthy that they even played the part of a bank on occasions and received deposits from the people. Some Buddhist inscriptions mention kings entrusting moneys to weavers' organisations for safe custody. The Jataka stories speak of weavers' craft guilds with their प्रमुख, ज्येष्ठ and भांडागारिक. These organizations had their own rules for internal management and for the receiving and training of apprentices. References to the master-craftsman are to be found as early as in the नारदस्मृति which lays down elaborate instructions as to the relative duties of master and apprentice.

For the millions in the country there was nothing like the purchase of food grains or clothing, for the needs in respect of both were met in the home. It was only the princes and chiefs or the rich town-dwellers who

Spinning for
Wage and
Cloth
Standards.

10 HAND SPINNING AND HAND WEAVING

had to engage paid spinners and, for their own purposes, patronise the art of fine spinning. The merchant who exported muslin to foreign lands bought yarn at the fairs and had it woven into cloth. But every royal house had invariably to keep a regular establishment of its own for the purposes of fine spinning and weaving, as appears from the Arthashastra of Kautilya which elaborates the functions of the officer named सूत्राध्यक्ष (Yarn Superintendent) and lays down his routine and duties*. Some of these rules are extremely significant, for they give us an idea as to how spinning for wage was carried on. For instance, one rule says, "Wages shall be cut short if making allowance for the quality of the raw material the quantity of the threads spun is found to fall short." This shows that the court fixed standards of fineness for every given quality of cotton and if the yardage of yarn was found to fall short of the fixed standard, a penalty in the shape of a cut in the wages was levied on the spinner. The court was strict in its dealing with spinners; the very best use was made out of the cotton issued for spinning and the golden rule of payment by length was adopted. Yarn was scientifically treated and due

* 1. See Ch. 33 of अर्थशास्त्र p. 140, Shama Shastri's edition and also page 119 dealing with the protection of artisans.

attention was paid to quality. One observation appears in the Arthashastra that every five palas of raw cotton (कापिल) and of flax (क्षौम) will yield one pala of yarn. Such and other standards must have been well known throughout the country. The weaver like the spinner was also expected to conform to certain fixed standards and the Arthashastra repeats the old formula of Manu which laid down that if the weaver did not give 11 palas weight for every 10 palas after sizing the yarn with rice water and the like he was liable to be punished. An observant eye vigilantly checked the weaver's output, and all frauds by way of heavy and excessive sizing and loose texture were noted against him. It is interesting in this connection to see that the Shukraniti, an earlier treatise on Arthashastra, mentions an officer called वस्त्रप whose business it was to fix the prices of woollen, silken and other fabrics by studying the places of their origin, the fineness or roughness of texture and the durability or otherwise of the material. Each province or kingdom had its own specialities. Vanga was famous for the manufacture of a white and soft fabric called *dukula* (दुकुल), while the Pandiya country produced black fabrics as soft as the surface of a gem and of uniform and mixed texture. Mathura, Aparanta, Kalinga, Kasi, Vatsa (Kausambi),

12 HAND SPINNING AND HAND WEAVING

Mahisha or Mahishamati were famed for their production of cotton goods (Arthashastra, Chap. II-11).

As spinning was common among the people they knew that by plying the wheel they could eke out an honest livelihood even in the absence of other employment. The wheel was the comfort of the poverty-stricken, the hope of the forlorn. This is forcibly illustrated in a Jataka story where a woman's soothing words to a dying husband were "I know the art of spinning cotton into yarn and by this means I shall be able to bring up our children." Spinning could effectively relieve destitution and the Sutradyaksha of the Arthashastra was to give spinning as work for the absolutely poor and destitute such as cripples, poor women who did not stir out of their homes, girls obliged to work for their subsistence and the like. Spinning operated like a kind of poor law. Even in the days of Manu, it must have been so if we believe his able commentator Kulluka Bhatta, who, while discussing the nature of work suited to widows and other poor women for whom it was not possible to do out-door labour, could think of spinning as the only honest means of livelihood for them.

That the arts of spinning and weaving were universally known and practised in India

when other countries had not even heard of cotton fabrics is a fact to which eloquent testimony is borne by history which tells us that some thousands of years before the birth

Trade in
Cotton Cloth
and Trade
Routes.

of Christ, Indian cotton fabrics found their way into Babylon. Dr. Sayce, the famous Assyriologist, points to the use of the word "Sindhu" for muslin in an old Babylonian list of clothes as the clearest proof that there was sea-borne trade between Babylon and the people who spoke an Aryan dialect and lived in the country watered by the Indus. The correctness of the notion popularly current that Egyptian mummies were draped in fine Indian muslin is doubted by writers like Mr. Baine, but that does not take away from the antiquity of the Indian cotton trade. In fact, the Greek name, "Sindon" for cotton fabrics is etymologically akin to India's Sindhu. Again words like "Gangetika" which to the Greek meant muslin probably indicating the place from which this fine product came and "calico" which owes its origin to Calicut, the port of shipment from which this class of goods was despatched, serve to indicate an extensive sea-borne trade that existed in these articles through centuries. That the Greeks were ignorant of the existence of cotton even during the days of Herodotus is brought out by the fact that this eminent historian described cotton

as 'a kind of wool better than that of sheep'. Greek writers like Aristobulus, one of Alexander's generals, described the cotton plant as "the wool-bearing tree and that it bore a capsule that contained seeds which were taken out and that which remained was carded like wool." Nearchus the admiral of Alexander the Great reported "that there were in India trees bearing as it were flocks of branches of wool and that the Indians made of this wool garments of surpassing whiteness*. Cotton was so common throughout India, yet so strange an object to visitors from other lands, that none could fail to notice the vast potentialities of cotton and of the trade that it gave rise to in cotton fabrics. There was a busy internal trade in all parts of the country and it is enough for our purposes to say that cotton goods formed no mean part of it. The three great trade routes traversing the country then were, (1) East to West from Benares for the Sea ports on the West Coast, Bharukachha or Broach, Sovira and its port

* There was a curious myth in the middle ages, in Europe known as "the vegetable lamb of Tartary" or the "Scythian Lamb." It was supposed that the fruit or seed-pod of a particular tree, when it burst fully open, disclosed to view within it a little lamb. From the fleeces of these "tree lambs" which were of surpassing whiteness, the natives of the countries where these 'tree lambs' are found wove materials for their garments and head-dress. This superstition, brought by Sir John Mandeville into England, continued to be believed till the 17th century.

Rurukka, (ii) North to South-East from Gandhara to the Maghada country. (It is probably to this that Megasthenes alludes as the royal road connecting Pataliputra with the Indus valley), and (iii) North to South-West from Shravasti to Pratisthana with six chief halting places. It was through these and other trade routes that cotton goods poured into the towns on the sea-coast and were shipped from thence to foreign lands. Fine muslin and coarse cottons were produced in great quantities and were carried both by land and sea to Western Asia, Syria, Babylon, Persia, China, Java, Pegu, Malacca, Greece, Rome and Egypt. These fabrics passed out of India by the great caravan routes either by Samarkand or by the passes of the Hindukush, by Bokhara and Khyber through Turkestan and Tartary even into Russia, and by Egypt to the countries on the Mediteranean. There was also a great maritime activity between India and China. The whole coast of further India from Suvarnabhumi or Burma to China, and also of the islands of Malay Archipelago was studded with Indian colonies and naval stations which ocean liners regularly plying in the Eastern waters constantly used as convenient halting places. The following were some of the chief ports and places in the early period of Indian history from where cotton fabrics were exported to foreign coun-

tries (1) Barbaricon at the mouth of the Indus, (2) the Gulf of Cambay (mainland of Anake or Aparantaka), (3) Ujjain which sent a great variety of merchandise to Baryagaza or Broach, (4) Paithana and Devagiri the chief Maratha marts, (5) Surat and Navsari, (6) Kanyakumari, Massalia (Masulipatam), Kaveripatanam and a number of other Dravidian ports which were thronged with Yavana and other foreign traders. The chief characteristic of the seaborne trade was that articles of great value in small bulk formed the cargo of the vessels in those days. Articles used in clothing must have played a prominent part in it and contributed in no small measure to India's trade prosperity. It was her renowned art and textile fabrics and her great discoveries in applied chemistry that enabled her to command through centuries the markets of the East as well as of the West. Her ports, the busy emporia of an ever-growing and expanding trade, kept in touch with all parts of the then known world and compelled every foreign visitor to this country to record his willing admiration.

In so many forms was spinning and weaving known in ancient India and to such a degree of excellence and scientific perfection had the arts attained, that every foreign traveller who came to this country either for trade or for

Foreign
Testimony.

other purposes felt obliged to record in silent wonder his tribute to the cotton manufactures of the country. The author of the *Periplus of the Erythraean sea*, one of the earliest authorities on the world's trade and commerce, mentions a variety of Indian cotton fabrics and using the word "Karposses" distinguishes between ordinary, superior and very fine fabrics. Raw cotton, he adds, was also used for cushions and mattresses in India. Arrian who came on towards the close of the same century (131-135 A.D.) wrote that Indian cotton whiter than that of any other country was carried by the Arabs from Broach up to the Red Sea to Aduli and further mentioned that an extensive trade was being carried on in the dyed sheets of Masulipatam. He described the dress of the Indians as composed of two sheets of cotton cloth though often of a variety of bright and variegated colours and flowered patterns. India was to every foreigner the country of cotton. Rome and the Roman Empire drew largely on India for cotton cloth. It was through Egypt that the productions of India found their way into Rome and this Indo-Egyptian maritime traffic continued for well nigh a thousand years till the Mahomedans under Caliph Omar by the conquest of Egypt stopped communication between that country and India. It was about 100 B.C. that the Romans adopted Indian cottons for

18 HAND SPINNING AND HAND WEAVING

their clothing. In fact, the Romans paid such fantastic prices for Indian muslins, silks and other "gorgeous cloth of gold and brocades" that they served to excite the Elder Pliny into a bitter condemnation of the extravagance which the historian mentions cost the Kingdom nearly a hundred million sesterces*. The lucrative trade of India in cotton cloth continued through centuries, because the Indian fabric was the only one of its kind in the world. Through the port towns of Gujarat and the Coromandel coast poured cotton cloth into foreign lands. Indian cottons are found in the list of goods charged with duties in Justinian's Digest of Laws (A.D. 552). It is recorded that Omar, the second Caliph, preached in a tattered cotton gown, torn in twelve places. Ali used a thin cotton gown. In fact, Indian cotton was everywhere the apparel of society, in Persia, Mesopotamia, Asia Minor, Java and the numerous other islands of the Indo-Chinese Archipelago. The finer fabrics were exceedingly popular in the importing countries. The muslins of Bengal though in a sense unique products were not the only fine and delicate fabrics of the country. There were other equally far-famed varieties

* Silk, muslin and cotton were sold at fabulously high prices in Rome. In the reign of Aurelian, silk was worth fully its weight in gold. It was Tiberius Caesar who had to pass a law forbidding the wearing of transparent silk as an indecent dress.

which for elegance and beauty of design and delicate shades of colour could hardly be equalled in any part of the world. Marco Polo who came to India in the 13th century speaks of the 'finest muslins and other costly fabrics' made in the Telugu country. "In sooth," he says, "they look like the tissue of the spider's web. There is no king or queen in the world but might be glad to wear them." The punjam cloth of Vizagapatam, the chintz of Masula, the salempores of Nellore and the muslins of Arni found eager buyers abroad. Barbosa who travelled about the beginning of the 15th century describes Cambay as a town filled with merchants from all countries and with artisans and manufacturers like those of Flanders. He saw the cotton trade a flourishing pursuit. It was only a hundred years before Barbosa's visit that the cotton plant was introduced into Southern Europe.* For a time, cotton was used to make paper and it was the Italian states which tried it for the first time for manufacture into cloth. Venice, Milan and, later, Saxony and Prussia manufactured cotton cloths but nothing like the Indian product could be made. The trade in Indian

* The official annals of Japan show that cotton was introduced for the first time eleven centuries ago into that country by two Indians. (Dr. Taka Kasu on "What Japan owes to India" in the journal of the Indo-Japanese Association, January 1910.)

cottons continued as briskly as ever. The Arabs carried it into the Eastern Mediterranean and the Italians to the Levant. The testimony of travellers like Pyrard, Barbosa, Nicolo-Conti, Linschoten show that in all the countries and islands both to the west and east of India as also in the S. African lands Indian cottons continued to be supreme. Vart Thema (1503-1508), speaking of the prosperity of Bengal, says that it had a greater abundance of cotton than any other country in the world. He also mentions how from the city of Banghelle sail every year 50 ships laden with silk and cotton stuffs. Caesar Frederic, a Ventian merchant who came 60 years after, describes the extensive traffic carried on between San Thome and Pegu in cotton cloth of every sort, painted "which is a rarer thing, because this kind of cloth appears as if gilded with divers colours and the more they are washed the livelier the colours will show." Linschoten (close of the 16th century) observes that there is excellent and fair linen of cotton made in Negapatam, St. Thome, and Masulipatam "of all colours woven in the divers sorts of loom work, very fine and cunningly wrought which is much worn in India and better esteemed than silk for that it is higher priced than silk because of the fineness and cunning workmanship." Bernier, travelling in the 17th century,

marvels at the incredible fineness of Indian cotton cloth. His contemporary, Tavernier, speaks of the calicoes of Bengal and Malwa which are made so fine that you can hardly feel them in your hand and the thread when spun is scarcely discernible. This kind of praise may be easily multiplied to any extent by quoting from accounts of other travellers. All this ample and mutually corroborative testimony serves to show that the quality of Indian cotton manufactures had never at all deteriorated, the skill and the deft practice of centuries having left their impress on the national character, and when Mount Stuart Elphinstone wrote in 1841, "that of all the Indian manufactures the most remarkable is that of cotton cloth the beauty and the delicacy of which was so long admired and which in fineness of texture has never yet been approached in any other country," he was only echoing the testimony of ages.

What was it that secured for India the world supremacy in cotton manufactures? One fact seems apparent. India was above all the only cotton producing country and she enjoyed a plentiful supply of the raw material. As one early traveller said, cotton was as abundant as food. It was the hereditary skill assiduously cultivated and delicately nursed of

Causes of
Indian
Supremacy.

families, of whole castes, that worked on this raw material and produced the finest fabrics ever known to humanity. Here nature was as bountiful as could be imagined and invested a whole race with the genius for cunning workmanship. The ability to do willing, intermittent manual labour and the continued acquisition of knowledge in respect of the arts of dyeing and printing enabled the Indian weaver to effect an easy conquest of the world's markets. He toiled in a beneficent climate which rendered all colours lively, durable and brilliant, imparting to his manufacture a beauty all its own. His labour was well rewarded and he got high prices for his products. He could always turn for help to the people whose gratitude was such that they accorded him a very high place in society. The nation was proud of the spinner and the weaver who adorned the body as no one else did.

The Muslim invasions and the conquest that followed made no difference so far as the industrial prosperity of India was concerned. If anything, Indian manufactures received added patronage from Muslim Emperors. To the fine arts of spinning and weaving they turned their attention as did the Hindu princes before them and to take but one of many instances the Dacca muslin trade almost entire-

Muslim
Patronage.

ly carried on by Hindu weavers and spinners flourished under the enduring and benevolent patronage of the Dacca Nawabs and the Emperors at Delhi. Fond of pomp and luxury, Nawabs and Emperors vied with one another in fostering the growth of indigenous art. It is unfortunate that there are not any precise data available for arriving at any quantitative estimates of the cotton manufactures in the country during the period of the Mughal Emperors.

Mr. Moreland in "India at the Death of Akbar" has attempted to arrive at one such estimate and he puts the figure at the very low computation of 13 yards per head of the then population. It is beyond the scope of this treatise to consider his conclusions in detail. It is enough for us to point out that his method of working out the figure is extremely defective. The foreign trade in cotton is sought to be estimated in terms of the shipping tonnage where there is room for considerable error and difference of opinion the only data available in this case being the English and the Dutch shipping records and invoices - and the production for internal consumption in the country is fixed arbitrarily at low standards. One fact is however clear even to Dr. Moreland that "Indian looms had a practical monopoly of the home market for clothes

At the
Death of
Akbar.

and in addition had three principal export markets: Arabia, and beyond, Burma and the Eastern islands besides minor outlets in various other parts of Asia and on the Eastern coast of Africa." Pyrard who visited India at the beginning of the 16th century was impressed with the trade and prosperity of ports like Cambay, Surat, Calicut and Goa * and wrote that "the principal riches consist chiefly of silk and cotton stuffs wherewith everyone from the Cape of Good Hope to China, men and women, is clothed from head to foot. These stuffs are worked, the cotton also made into cloths of the whiteness of snow and very delicate and fine. (Vol. II. Pyrard's Travels,

* The following is a summary of Pyrard's detailed description of some ports and principal towns: -

Surat. "The gate of Mecca" or "the city of the Sun" was a celebrated port of Gujarat. The people were grave, judicious, tall, gaudily clothed in long white calico or silken robes. It annually exported all sorts of piece goods, white and coloured, and striped for which Gujarat was so famous.

Bhaur. "The country is vastly rich and productive of all kinds of valuable merchandise which the merchants from all parts of India and the East come there to sell. But the chiefest are silks which are obtained there in such quantity that alone they almost supply all Goa, all India. It also supplies choice cotton fabrics.

Golden Goa. It was the rendezvous of the merchants of all countries, European and Eastern. It exported all Indian products.

Calicut. Calicut exported very fine cotton fabrics under the name of calico and diverse sorts of painted and patterned tapestry to all parts of the world. People of all races gathered there.

p.247) “What is to be observed, however, of all their manufactures,” adds Pyrard, “is this that they are both of good workmanship and cheap”. The production for export mainly flowed through the gulf of Cambay, the ports of Coromandel and Bengal and through the Indus plain. Pyrard like so many others who came before him was deeply impressed with the magnitude of the trade in cotton goods. So too were the later travellers, Bernier and Tavernier, and it may be safely asserted that the staple industry of the country, cotton spinning and weaving, kept progressively growing during the reigns of successive Mughul Emperors.

Besides, there seems to have been something like a transference of the art of weaving from the hands of the Hindus to Mussalmans in some parts of Northern India like the United Provinces, Behar and the Punjab where the Julahas or the Muslim weavers form to this day a considerable proportion, possibly the majority, of the population of weavers. Mussalmans took to weaving in large numbers side by side with the Hindus even as they took to other trades and professions. Weaving was certainly held in high esteem, and the great Kabir like the south Indian Tiruvalluwar of an earlier day was a weaver by profession and found contentment and happiness in his calling.

A Trans-
ference of
the Trade.

The cotton trade also witnessed the organization of a new occupation. That the modern Pinjari is almost everywhere except in the U. P. a mussalman points probably to the fact that carding was elevated to the rank of a separate occupation for the first time under Muslim rule. The professional carder may have at first attended only to the stuffing of cushions and mattresses. Later on he came to feed the spinners and there is evidence to show that he later still grew up in some parts of the country into something like a broker, a link so to say between the spinner and the weaver, stored cotton, distributed slivers to the spinners and gathered the yarn to be woven, thus adding to his regular wage slight brokerage charges on cotton and yarn sales. It is highly probable that the early Hindus carded their cotton with the hand or with the small bow which thousands of spinners in Bengal and in South India are seen to use even to this day. Here is a question for the student of history to investigate and follow up, the history of the carding bow and of carding as an independent occupation.

The beginning of the 15th century saw the European powers struggling for the monopoly of trade in the Indian and generally in the Eastern markets. The lure of gold brought

When was
the Carder
Born.

The
European
Struggle.

them into India and the other lands of the East. First came the Portuguese, then the Dutch, and finally the French and the British. Their prime object was trade and the products of the Indian weavers and other craftsmen easily became for them most profitable articles for export. The first factories of the East India Company in India were so many weavers' settlements—Surat, Hoogly, Masulipatam and Calicut. The demand in England for Indian calicoes went up increasingly and in a letter written in 1665 the Directors of the Company signified to their agents in India their desire that the trade should be, among other things, in "Indian calicoes, being at present the most requestable commodities which come from your parts." The trade continued through a century and more, with what results we shall see later. Commercial jealousy backed up by the lust for political ascendancy undid the vast industry and art of India, which had kept a teeming population above want in the past and the loss of which reduced it to poverty and utter destitution. But the skill of centuries that was responsible for superb manufactures could not be crushed without a struggle. The muslin of Dacca is one instance in point and the history of the trade in that class of fabric is very instructive.

It has already been noticed how even the early Greeks knew Bengal muslins as "Gangetika." The chequered muslins of Dacca are understood to be included in the "*diakrossia*" of the Periplus, a term which is rendered "*striped*" by Appollonius. The citizens of Rome in the proud days of the Empire loved to clothe themselves in the rich and gaudy Indian muslin. Pliny mentioning the Bengal muslins says that the body shone through them. Traveller after traveller loved to dwell upon the richness and delicacy of these fabrics. Sulaiman, an Arab visitor of the ninth century, wrote "of a stuff made in this country which is not to be found elsewhere, so fine and delicate is this material that a dress made of it may be passed through a signet ring. It is made of cotton and I have seen a piece of it." (Elliot's *Historians*, Vol. I, p. 5.) The reference is presumably to the muslins of Dacca. For centuries the art continued to develop and when Pyrard came into Bengal he saw that "some of the cottons made there were so fine that it was difficult to say whether a person attired in them was clothed or nude." Ralph Fitch observed that the finest cotton cloth in India was made in Sonargoan near Dacca. The Mughal Emperors did not fail to bestow their lavish patronage on workmen who showed such unrivalled skill in the manufac-

ture of muslins. The Empress Nurjehan greatly encouraged this art and under her patronage it acquired celebrity. The muslin was the gift of gifts Emperors could give to distinguished visitors to their Courts. Tavernier describes with what delight "a Persian ambassador presented to his King a cocoanut shell about the size of an ostrich egg studded with pearls which on opening was found to contain a turban of muslin 60 cubits long". The muslins found a ready market everywhere and were eagerly coveted by the merchants of the East India Company when they came into Bengal. Till the forties of the last century, they formed one of the principal articles of export from India but when the cheap and flimsy foreign fabrics replaced them they gradually ceased to be produced. In 1836, Dr. Ure records "that yarn continued to be spun and muslins continued to be manufactured at Dacca to which European ingenuity could afford no parallel and which led a competent judge to say it was beyond his conception, how this yarn greatly finer than the highest number spun in England could be spun by the distaff and spindle or woven afterwards by any machinery." Dr. Taylor, who wrote in 1840 a descriptive and historical account of these coveted manufactures, says "that the very fine muslin of Dacca had always been made to order and chiefly

for persons of rank and wealth in India and though the demand for them of late years has been extremely limited compared with what it was in the days of the Great Mughul, it has yet proved sufficient to preserve the art of making them from falling into disuse."

There are a good number of details available as to the cotton used by the Dacca spinner, the quality of the yarn produced and the processes of spinning and then of weaving the the yarn into cloth. There is no doubt that the material out of which the fine muslin was made was entirely the product of the district. It was "*deshi*" cotton. It was of a peculiar quality on account of the peculiar kind of soil. Compared to other cotton available in Bengal it was much finer and longer in staple but yet compared with the American and the South Island cottons of today, it must be pronounced to be of shorter staple. One common test among the weavers of Dacca was the tendency of the cotton to swell on bleaching. Analysing the cotton plant from which the Dacca spinners took their cotton an expert noted down these four points, "(1) The branches are more erect and the lobes of the leaves more pointed. (2) The whole of the plant is tinged with a reddish colour, even the petioles and nerves of the leaves are less transparent. (3) The tendrils which support the

flowers are longer and the exterior margin of the petals is tinged with red. (4) The staple of the cotton is longer, much finer and softer compared to other Bengal cottons.’* The plant was an annual one and was five feet in height. It was extensively cultivated when the industry was prosperous but then different shades of quality in the staple were observable. When Dr. Taylor wrote of Dacca, the cotton had degenerated into one of an inferior variety. The crops, the Doctor noticed, were less abundant in the years of which he wrote, “the fibres though apparently equally fine and soft were shorter and more firmly adhered to the seed than the produce of former years.” It was this cotton that was carded by means of a small bow made of bamboo with a string of catgut or muga silk. The whole process of carding and spinning is thus described in detail by Dr. Taylor. “The cotton is first cleaned by the women who spin the thread. The instruments which are used to separate the seed from the wool are the churki and the dullumcathee. The former is the common handmill or pair of fluted cylinders which is in use throughout the country and which is employed

* The cotton used by the present-day Ganjam spinners is also an indigenous variety, not very long stapled but yet having a silken and smooth surface. It is grown on the hill slopes in the district where there is abundant rainfall.

here to clean cotton for the second rate qualities of thread. The dullumcathee is used to clean small quantities of material for the finest thread. It is simply an iron pin that is rolled upon a flat board upon which the cotton is laid and which is made a little thicker at its middle than at the extremities which project beyond the sides of the board so as to admit of its being worked or rolled by the hands or feet.* The dullumcathee is said to crush the fibre less than the mill. The next step is to tease the cotton or to free it from the remains of husks. This is done by means of a small bow made of bamboo with a string of catgut or muga silk. The cotton that is used for the finest thread undergoes a sifting before it is teased or bowed. The instrument which is employed for this purpose is the dried jaw-bone of the Baoli fish.† This forms an arch about 2 inches in diameter and presents on its inner surface a great number of very fine curved teeth; it is used in the manner of a comb and allows only the fine fibres of the cotton to pass through it.

* The Ganjam spinners of today use the very same apparatus for ginning cotton meant for the spinning of very fine thread.

† Cotton is likewise treated by the Andhra spinners of fine yarn. All this probably goes to show that the spinning of fine yarn was carried on throughout the country on the same lines.

After this process of carding, the cotton is reduced to a state of downy fleece by means of the bow and is then carefully spread out on the smooth surface of the dried skin of a cheetul or cuchia fish. This is next rolled up in a small cylindrical case which is held in the hand during the process of spinning. The spinning apparatus which is usually contained in a small workbasket, not unlike the *calathus* of the ancients, comprises the cylindrical roll of cotton (*puni*), a delicate iron spindle, a piece of shell embedded in clay and a little hollow stone containing chalk powder to which the spinner occasionally applies her fingers. The spindle is not much thicker than a stout needle.* It is from 10 to 14 inches in length and attached to it near its lower point, is a small ball of unbaked clay to give it sufficient weight in turning. The spinner holds the *tukwa* in an inclined position with its point resting in the hollow of the piece of shell and turns it between the fore-finger and the thumb of the right-hand while she at the same time draws out the single filaments from the roll of cotton held in the left hand and twists them into yarn upon the spindle." When a certain quantity of the yarn has thus been spun and collected on this instrument it is wound from it upon a reed. It was believed

* Dr. Taylor notes that coarser thread, i.e., below 60 counts was not spun on the *tukwa* or spindle but on a wheel.

that dryness of the air, which prevented the filaments of the cotton being sufficiently attenuated or elongated, was unfavourable to the spinning of fine yarn. A certain degree of moisture combined with a temperature of about 82° was according to Dr. Taylor the best suited to the carrying on of spinning. And so the Dacca spinners most of whom were Hindu women worked from soon after early dawn to 9 or 10 in the morning and from 3 or 4 in the afternoon to half an hour before sunset. The spinning of thread occupied all classes of women in Dacca who employed their leisure hours only for this purpose. It is noteworthy that the best spinners who drew the finest thread were women between 18 and 30 years of age.

Some figures of Output and Quality of Yarn.	A spinner devoting the whole morning to the spindle could make only half a tola weight of the finest thread in a month. Her speed could not have been anything over 40 to 50 yards an hour. The thread being valued
---	---

at Rs. 8 per tola weight the spinners' earnings would come to Rs. 4 a month or Rs. 48 in the year, if she worked wholetime. Usually, however, her earnings ranged between Rs. 20 to Rs. 40. The quality of the thread spun left nothing to be desired and expert opinion has it that it was superior in every respect to the machine-made yarn of foreign countries. The

standard quality of yarn said to have been used in the manufacture of muslins for the court of Delhi was 150 to 160 *haths* in length to a *ratti* in weight. "A skein which a native weaver measured in my presence in 1846 and which was afterwards carefully weighed" notes Dr. Taylor, "proved to be in the proportion of upwards of 150 miles to the pound of cotton." This means that the yarn was over 500 counts. Possibly in the earlier years when the art had not deteriorated the count was even higher. The comparatively short fibres of the Dacca cotton from which this yarn was spun may not be adapted at all to spinning by machinery. The twist of the Dacca yarn was heavier compared with other machine-made fine thread. The yarn of Dacca also showed greater tenacity and strength. Mr. Forbes Watson in his "Survey of the Costumes and Textile Manufactures of India" cites expert opinion as to the quality of Dacca yarn which is as follows:—"It is positive on three points, first that the diameter of the Dacca yarn is less than that of the finest European, second that the number of filaments in each thread is considerably smaller in the Dacca than in the European yarn, third that the fineness of the Dacca yarn depends chiefly on the fact that it contains a smaller number of filaments." The result of the investigation from which the above points

36 HAND SPINNING AND HAND WEAVING

were gathered is set out in the following table :

Description	Diameter of threads (Parts of an inch)	No. of twists in threads per inch.
French muslin ... (International Ex- hibition 1862) ...	.0019	68.8
English muslin (1851) (440 counts).	.0018	56.6
Dacca muslin (Indian Museum).	.0013375	110.1
Dacca muslin (International Ex- hibition 1862) ...	.0015625	80.7

The difference in respect of the twist is very important and gives the key to the superior durability of the hand-made over the machine made fabric. It is well known that the muslins of Europe are practically useless for wear whereas the very finest of the hand-made ones are proverbially lasting and bear frequent washing which the finest English or European muslins do not. And, as a matter of fact, nothing yet made on the very best machinery in the West has ever been able to match "the woven air" of Dacca.

The weavers of Dacca showed themselves as experts in their methods of work as were the spinners. They used no less than 126 distinct processes in weaving. Special processes for

Weaving of
the muslin
in Dacca.

warping, sizing, dressing, bleaching, etc., are elaborately detailed in Dr. Forbes Watson's survey. The weavers of Dacca, all of whom were Hindus, being agile, slender and of a delicate build, worked hard and bore the strain of continuous toil showing an unwearied patience and matchless sense of touch and feel. Their sensibility of touch and their perception of weight were so nice that hardly a single piece ever lacked the perfection of form, texture and design aimed at by them. The starch they used was made of parched rice. The starch used for "shabnam" was always mixed with a small quantity of lamp-black. The weavers plied their looms under shelter and worked most during the rainy season (months of *Ashadh*, *Shravan* and *Bhadrapad*) which was the most favourable for their operations. The reason probably was that the moisture prevented the thread from breaking. In the hot season shallow vessels of water were kept below the looms. A piece of muslin usually measured 20 yards by 1 yard. It took 10 to 60 days to finish according as it was of first, second or third quality. A half piece of *malmul-khas* or *circarali* of the finest kind took even 5 to 6 months to manufacture. Fine chequered, embroidered and coloured patterns were put into the market. The *jamdani* muslin or the loom-figured one was the most expensive production of the Dacca loom. Their complicated

designs and the exquisite delicacy of manipulation displayed made them the *chef de oeuvre* of Indian art. The principal embroiderers were Muslim women of the lower classes and the wives of dhobies and they did their work so well that scarce a stitch was visible. Darners were also frequently employed for mending muslins and they could remove a single thread along the whole web of a cloth and replace it without difficulty. The mode of packing fine muslins was to enclose them in hollow bamboo tubes sufficiently large to contain even over 20 yards of cloth. Cylindrical cases of this kind in which the *mulmul-khas* muslins were sent to Delhi were lacquered and gilded. The price of the muslin varied from Rs. 100 to Rs. 400 each. The cloth being exceedingly fine and diaphanous, fanciful poetic names were given to it such as the "evening dew" (*shabnam*), "the woven air," or "running water" (*abrawan*). "*Shabnam*" so named from its gossamer threads indistinguishable even from the dew was supposed to be only third in quality while the first and the second were named "*malmulkhas*" or the King's muslin and "*abrawan*" or running water. Interesting stories are narrated as to how the Nawab Ali Verdi Khan chastised one of the Hindu weavers and banished him from the city for having carelessly left on the ground a fine piece of muslin to be eaten up

by his cow as grass, and of how the Emperor Aurangzeb was startled by his daughter's appearing almost naked before him in court whereupon the young princess remonstrated that she had as many as seven muslin suits on her person.

The art which reached its acme of perfection under Moghul patronage received its death blow when cheap and flimsy foreign muslin came freely to be introduced into the country and the Indian-made product was subjected to heavy duties of 75 to 80 per cent in England. Varthema in 1503, Fitch in 1598 and Tavernier in 1665 testified at successive periods to the vast trade being carried on in muslins with Arabia, Persia, Egypt, Pegu, Malacca, Sumatra and several countries on the Mediterranean sea. Mr. Bolts writing in 1772 says that in the time of the Nawab Ali Verdi Khan it was no uncommon occurrence for a master weaver to bring at one time as many as 800 pieces of muslins to a merchant. Mr. Day, Collector of Dacca in 1787, estimated the then trade of Dacca at a crore of rupees out of which nearly 30 to 40 lacs were spent only on cloths bought for exportation to Europe. It was in 1785 that the first English muslins were manufactured. They were introduced into India much later, but the export trade of Dacca was by that time throttled by heavy duties. Foreign

Decline of
Trade in
Muslins.

twist was got into the country in 1821 and came to supersede the home-made thread of Dacca. Year by year the trade began to decline. Dacca witnessed its fall. A competition unchecked in India while England was levying huge and disproportionate duties on imported Indian goods ruined the industry of ages and when in the forties of the last century the manufacture came to be stopped, nothing could ever afterwards revive it. The figures of export speak for themselves:—

<i>Year.</i>	<i>Value in Rs.</i>
1807	8,61,818 8 5
1810	5,56,996 0 0
1813	3,38,114 12 8
1817 -18	15,24,974 1 9
1821 -22	12,16,252 0 5
1825 -26	6,29,183 4 3
1829 -30	5,04,812 12 0
1831 -32	3,62,747 5 0
1834 -35	3,87,122 0 0

After 1840 the trade practically ceased. Even the home consumption languished and except for occasional pieces made to order there was no production in any quantity. While it was customary for a weaver to make goods on his own account and sell them to merchants at a profit during the early years of the eighteenth century, the weavers in 1850 undertook to work only when advances were paid and orders specifically placed with them.

The disparity in prices between the indigenous and the foreign stuff was too obvious to be overlooked and in counts not higher than 180's the difference came even to four and five times the price of the foreign articles. A comparison of the prices of yarn as they stood in 1840 would be an index to the competition that the Indian articles had to suffer.

TABLE III

Count of Yarn.	Weight of the thread.	Price of 1½ hanks.	
		English	Indian
	Rs. A. gds.	Rs. A. gds.	Rs. A. gds.
200	1 0 0	0 3 0	0 13 0
190	1 0 18	0 2 15	0 10 0
180	1 1 15	0 2 15	0 6 0
170	1 2 16	0 2 10	0 5 0
160	1 4 0	0 2 10	0 4 0
150	1 2 16	0 2 10	0 3 10

English twist between 30's and 200's had a monopoly of the Dacca market after 1840 and the little local manufacture that continued in the place was only in articles below 30's. Thus in the space of thirty years, the trade of Dacca with England which amounted to as many lacs of rupees became extinct and the manufacture of thread, the occupation of almost every family in the district, was abandoned. The arts of spinning and weaving which

afforded employment to a numerous and industrious population in the course of half a century passed into other hands which supplied the wants not only of the foreign nations but of India herself (vide Dr. Taylor). The cheap muslins of the West displaced the invaluable art of Dacca for whose protection nothing was done; the tinsel was not distinguished from gold and the glory of Dacca was no more. The population of the city which was no less than 200,000 in 1800 fell to something like 80,000 in 1840, the weavers and others having been drawn to agricultural and other pursuits; and when Sir Charles Treveleyan drew attention to this painful fact in his evidence before the Select Committee of Parliament, nothing could be done to recall all the unique art, the delicate human touch, and the rich culture that was associated with the muslins of Dacca, the industry having passed into the realms of the obscure past.

CHAPTER II

RUIN OF HAND SPINNING AND HAND WEAVING

Prior to the advent of the British and for
What a century and a half even after it,
Brought India in a sense held the world's
Englishmen markets in respect of cotton goods
into India. but the heavy arm of economic ex-
ploitation soon descending upon her crushed
the staple industry of ages and reduced her to
the miserable position of the "biggest con-
sumer " of foreign cloth. It is here proposed
to explain this catastrophic change that re-
versed the roles of producer and consumer.
As we have already noticed, it was the unlimit-
ed possibilities of trade in Indian manu-
factures that brought the European nations
to India. For then, neither the continental
nations, nor Great Britain, had any manu-
factures worth the name to be put into India.
The spices of the East Indian Islands and the
cotton of India yielded plentiful profits and
nation after nation, the Portuguese, the Dutch,
the French, and finally the English struggled
to sail on the high tide of roaring trade.
From the trade-wars that followed for the
retention of the mastery of the oriental
markets, Britain came out successful expelling
the other powers and getting hold of the

sovereign position. The successful emergence of Britain as the sovereign power in the East centres round the history of the East India Company. The Company was formed in virtue of a charter from Queen Elizabeth in 1600 but its first factories on the mainland of India were not set up till ten to forty years after, at Masulipatam in 1610, at Surat in 1612, at Madras in 1639, and at Hooghly in 1640. Cotton goods began to arrive direct into England after the formation of the first settlements but before that time the small demand for Indian cotton goods and calicoes in England was met by circuitous import through other countries. The excellence of the imported goods stimulated the demand for them and the trade grew rapidly. The Dutch had shown the way by penetrating into the country, fixing settlements on the Coramandel Coast on the one side and moving inland from Surat on the other side for the purchase of cotton goods. Dr. Moreland's estimate of goods carried by the Dutch to Batavia during successive years from 1625 onwards is interesting as showing the rapid expansion of trade.

Year.	Coramandel	Bengal	Gujarat	Total
1625	1700 bales	...	800	2500
1641-44 (annual)	2500 „	....	1000	3500
1657-61 (annual).	4000 „	500	1200	5700

One of the ships that sailed for Java from Surat contained in its bill of lading no less than 30 distinct entries for cotton goods. The popularity of the cottons in the importing countries may be gathered from the fact that nearly 150 varieties, all of which are indexed in the volumes of Forster's "English Factories," were in demand. At first there seems to have been some reluctance in England to send out gold to India. Sir Thomas Roe told the Directors of the East India Company that there was little demand for the commodities made in India and that consequently it would be better to the form confine the trade in cotton goods mostly to Asia and Africa. But Sir Thomas Roe's statement soon proved false because the demand for Indian goods kept continually rising. Successively the markets in Gujarat, the Coramandel Coast and in Bengal were exploited. The Coramandel seemed to yield the best results and the English, like the Dutch, concentrated on it for a fairly long number of years. From Surat too were shipped calicoes in increasing quantities. 12,500 pieces were exported in 1614 and 1,65,000 pieces in 1625. The "Royal Anne" sailing in 1618-19 carried only 14,000 pieces but six years later fifteen times the quantity was requisitioned. In 1614, only £500 worth of yarn was sent but the demand for it grew so

large that the Company's servants here were asked to secure yarn either plain, reeled, or cross-reeled, in case they could not get at finished goods. In 1628, 528 bales of yarn were shipped to England. "There is no fear of *glutting the market here* by selling cotton yarn," wrote the Directors of the Company, "for more can be sold than has ever yet come from India". It appears that this export of yarn raised its price in India to the prejudice of Indian weavers, so much so that in Surat and Broach the weavers refused to sell cloth till the export of yarn was stopped. The annual importation of calicoes from 1627-40 continued to be at a fairly high level, a minimum of over 50,000 pieces being maintained. They cost on an average 7 shillings per piece in India but were sold in London for 20 shillings a piece. The profits were good, and the East India Company, just about this period, in answer to some objections which were started against the Indian trade, urged vehemently that instead of having to pay £5,00,000 annually to Holland and France for linens, lawns and cambrics, the consumption of which was now superseded by the Indian articles, the foreigners now actually paid them equal sums of money for goods supplied. Thirty years after the trade was still found to be lucrative and in 1651 the Directors of the East India Company reported that "calicoes were the

most requestable commodities that came from India”.

The manufactures of India had altered the tastes of the English consumers and as there was an unbroken and continuous demand for them the Company's trade grew to very large proportions, and when everyone saw how lucrative it was, there grew alongside of it an enormous private trade which brought equally heavy profits. “Before the Restoration,” records the historian, “scarcely one ship from the Thames had visited the delta of the Ganges. But during the twentyfour years which followed the Restoration the value of the annual imports from that rich and populous district increased from £ 8,000 to £ 3,00,000. The profits were such that in 1676, every proprietor of the Company received as bonus a quantity of stock equal to that which he held and on the double, stock dividends of 20 per cent were paid for 5 years.” This was enough to excite the cupidity of interlopers who formed new companies, fitted out rival expeditions and intrigued to oust the East India Company from its privileged position. It is beyond our province to go through all the vicissitudes which the commercial jealousies roused in England brought on, but it is enough for our purposes to note that by the end of the 17th century all differences bet-

Profits and
an Outcry.

ween trading companies in England had been composed and the trade monopoly continued to be with the East India Company with which the other companies had become amalgamated. Almost at the same time the popularity of Indian cottons was at its height in England. In 1677, the annual imports of calicoes were estimated at £ 1,60,000, and in 1681 it was asserted in the House of Commons that over £ 3,00,000 were spent yearly in England for the purchase of Indian goods including printed and painted calicoes for cloth, beds, hangings, etc. A comparison of the imports for the five years from 1673-1678 with those of a like period from 1680-83 will serve to bring out the striking pace at which the trade grew :—

Year	Pieces
1673-78	39,03,500
1680-83	85,64,000

The average exceeded two million pieces a year and this, it must be remembered, in spite of the fact that every piece of calico was subject to a duty of 9 pence to 3 shillings (Tonnage and Poundage Act). The jealousy of the local woollen manufacturers was roused and there was a loud outcry against Indian calicoes and silks. The House of Commons was petitioned to ban the wearing of East Indian silks. Heavy duties were laid on the importation of cotton

and silk goods. In 1685, a duty of £ 10 on £ 100 value was imposed on "all calicoes and other Indian linen and all wrought silks which are manufactures of India made of or mixed with hemp or silk and thread or cotton imported into England." In 1690 this duty was doubled. Notwithstanding these restrictions Indian silks and calicoes became the general wear in England. Lecky in his history of England records how when Queen Mary came to England with her husband after the English revolution of 1688 she brought a passion for coloured Indian calicoes which speedily spread to all classes of society. The merchants and capitalists of Yorkshire, Wiltshire, Norwich and Spitalfields raised their voices in angry protest and their case is thus rhetorically summarised by Macaulay in his *History of England*. "Those it was said were happy days for inhabitants both of our pasture lands and of our manufacturing towns when every gown, every waist-coat, every bed was made of material which our own flocks had furnished to our own looms; where were now the brave old hangings of Arras which had adorned the walls of the lordly mansions in the time of Elizabeth? And was it not a shame to see a gentleman whose ancestors had known nothing but stuffs made by English hands out of English fleece flaunting in the calico suit and a pair of silk stockings from Morshida-

bad?" Clamours like this were also raised in an anonymous pamphlet called "The Naked Truth" published in 1696 which complained that the advantage of the Company lay in their muslin and other fabrics. It spoke of the muslin half in anger and half in contempt. "Fashion is truly termed a witch; the dearer and scarcer any commodity the more the mode; 30 shillings a yard for muslins and only the shadow of a commodity when procured?" Only a few years before the appearance of this pamphlet, Parliament had passed an act making it obligatory that the dead should be draped only in woollen "and there were not sanguine clothiers wanting who hoped that the same obligation would be extended even to the living." It fell to the lot of Daniel Defoe to voice the wrath of local commerce and he wrote in picturesque language that "the general fancy of people runs upon East India goods to that degree that the chintz and painted calicoes which before were made use of for carpets, quilts, etc. and to clothe children and ordinary people became now the dress of our ladies; and such is the power of a mode as we saw our persons of quality dressed in Indian carpets which but a few years before their chamber-maids would have thought too ordinary for them; the chintz was advanced from lying upon their floors to their backs,

from the foot-cloth to the pettycoat ; and even the Queen herself at this time was pleased to appear in China and Japan, I mean china silk and calico. Nor was this all, but it crept into our closets, bed-chambers, curtains, cushions, chairs and at last beds themselves were nothing but calicoes or Indian stuffs ; and, in short, almost everything that used to be made of wool or silk relating either to the dress of the women or the furniture of our houses was furnished by the India trade. The general goods bought from India are made five parts in six under our price and *being imported* and sold at an extravagant advantage are yet capable of under-selling our cheapest." It was the incredible cheapness and also the durability of Indian-made fabrics that captured the British market. The uncontrollable fury of the local artisans in Britain at one time broke out even into a riot at Colchester where Defoe tells us that women who wore Indian calicoes were mobbed and insulted. The agitation against Indian manufactures found prompt and ready response from the Parliament which in a series of statutes passed after 1700 prohibited the wear of Indian goods in Great Britain.

In 1700 (William III, Chapter X, Act 11 and 12) an act was passed prohibiting the importation of printed calicoes from India. This necessarily

Prohibition
as a Policy

led to the importation of plain calicoes from India to be printed in England, but even this was put a stop to in 1721 (George I. C. I.) by an act which prohibited the use and wear of printed calicoes, prescribed a penalty of £5 for each offence on the wearer and of £20 on the seller of such goods. Sixteen years later an act prohibited the use this time of printed goods made entirely of cotton and the early prohibition imposed on mixed goods was raised. The use of calico however continued owing to "female perverseness or passion for fashion." In 1774 (George III, C. 72) Parliament laid down that cotton goods for sale in England should be made wholly of cotton spun and woven in the country. Unless for exportation, the import of Indian-made goods was not permitted. It is easy to understand the motive underlying all these prohibitory enactments which laid down very heavy and exacting penalties. They were one and all aimed at the competing Indian trade which Englishmen felt anxious to smother. What did not actually fall under prohibitions such as muslins, plain calicoes and the like were subjected to heavy duties as we shall see later.

Before we proceed to examine the nature of these duties, it would be necessary to take a brief survey of the British trade and administration in India during the 18th century. The

Position
during the
XVIII
Century.

import of calicoes at the commencement of the century stood as follows :—

YEAR	CALICOES	IMPORTED
1699	853,034	pieces.
1700	951,109	„
1701	826,101	„

This lucrative commerce benefitted England greatly. As years advanced Indian importations were subjected to vexatious prohibitions, and during this period of prohibition from 1708 to 1788 while the exports of the East India Company stood at £ 4,4 2,380 of bullion and £92,228 of goods, the imports consisting mainly of Indian calicoes and other woven goods and raw silk came up to £ 7,58,042. The East India Company sold goods of little value in India but successfully took out large quantities of cotton and silk goods from India for consumption in foreign markets. The figures for the sales by the Company from the year 1774 to 1792 of piecegoods imported from Bengal, Madras and Surat are very instructive.

54 HAND SPINNING AND HAND WEAVING

Year	Bengal Piecegoods		Madras Piecegoods		Surat Piecegoods		Total	
	Pieces	Sale value in sterling	Pieces	Sale value in sterling	Pieces	Sale value in sterling	Pieces	Sale value in sterling
1771	604,579	1,073,841	114,710	261,893	131,198	91,300	850,665	1,427,034
1772	626,160	1,035,686	273,766	523,094	147,029	87,176	1,046,955	1,045,950
1773	761,489	1,224,467	134,789	505,533	58,138	65,231	954,416	1,795,231
1774	616,226	1,105,230	207,086	644,563	38,366	54,788	861,678	1,804,591
1775	517,761	960,224	181,950	583,765	47,405	62,355	747,166	1,606,364
1776	607,878	1,090,744	209,538	515,557	18,822	13,308	836,238	1,619,609
1777	635,332	1,114,734	224,183	492,926	83,024	48,408	962,539	1,656,128
1778	805,010	1,194,613	296,182	422,213	61,285	32,207	162,447	1,649,033
1779	338,465	524,636	74,676	203,186	31,525	13,230	444,666	741,052
1780	474,703	984,763	170,130	257,626	18,605	11,349	600,438	1,253,738
1781	301,617	582,116	95,888	233,643	33,144	23,129	430,629	838,888
1782	446,488	1,033,357	72,188	204,163	56,597	29,403	565,273	1,267,123
1783	437,802	1,049,224	—	—	82,566	79,944	520,768	1,129,168
1784	516,088	908,370	44,810	116,883	31,130	22,607	592,028	1,047,860
1785	768,288	1,426,259	45,352	115,632	26,767	18,693	840,347	1,560,847
1786	764,173	1,458,416	43,240	97,511	—	—	807,413	1,555,927
1787	745,449	1,137,934	38,641	84,598	41,822	28,560	835,972	1,431,092
1788	594,728	978,507	96,455	191,826	41,806	29,937	732,989	1,200,270
1789	614,839	943,096	112,216	225,169	44,715	33,357	771,770	1,201,622
1790	866,282	1,485,080	126,221	253,625	33,131	9,639	1,025,634	1,748,344
1791	709,540	1,131,717	144,996	475,590	57,080	44,380	911,615	1,651,687
1792	607,329	1,194,875	240,108	577,400	25,910	21,050	873,347	1,793,625
Total	13,380,344	23,818,702	2,884,105	6,986,396	1,090,525	820,391	17,354,974	31,624,889

Trade grew fast but faster than the trade grew the desire for dominion and power. Right up to 1745, the Company had acquired but few territorial possessions in India and their position was mainly one of a trading corporation, though politically ambitious people involved them in trade wars which sometimes as in 1690 under Governor Child of Bombay nearly cost them their privileges. The very names of the chief factors in the Company's factories afford sufficient proof of the Company's original character. The Honour-able Agent and Governor who was first Member of Council received only a modest salary of £ 300 a year. Next to him were the "book-keeper," the "warehouse keeper" and the "customer". All the members of the Council were together designated as the "senior merchants", while the younger men in the Company's services came out as either 'writers' or 'apprentices'. They were all parts of a trading concern but the rapacity of the tradesmen was such that not only the Company but even the individual servants of the Company began each to carve out a trade for himself and smuggled goods under the name of the company. There were few men of public spirit in the Company's services either in England or in India and the only object

which appealed to those in service was the amassing of wealth no matter what means they employed for the purpose. Mr. Bolts who was himself alderman of the Mayor's Court at Calcutta and a servant of the company for a number of years, writing in 1712 of the morals of the Company's administrators, makes the following pungent remarks:—"It may fairly be said that there is scarcely any public spirit apparent among the Company's leaders either in England or in India. The loaves and fishes are the grand, almost the sole, object. The questions, 'how many lacs shall I put into my pocket or how many sons, nephews or dependents shall I provide for at the expense of the miserable inhabitants of the subjected dominions,' are those which of late have been foremost to be propounded by the chiefs of the Company on both sides of the ocean. Hence the dominions in Asia like the distant Roman provinces during the decline of that Empire have been abandoned a lawful prey to distant speculators, in so much that many servants of the Crown after exhibiting such scenes of barbarity as can scarcely be paralleled in history have returned to England loaded with wealth where entrenching themselves in boroughs or East India stock influence, they have set justice at defiance either in the cause of their country or of oppressed innocence."

Everywhere there was increasing oppression and misrule. Every servant of a British factor was armed with the powers of the master and the latter was armed with the powers of the Company. The artisans were forced to buy dear and sell cheap and on them were heaped illegal punishments. Every petty servant of the Company assumed the role of a potentate and enriched himself with the profits of an illicit trade in defiance of all laws regulating the customs. "The business of the servant of the company", wrote Macaulay speaking of those times, "was simply to wring out a hundred or two hundred thousand pounds sterling, return home before his constitution suffered from the heat, to marry a peer's daughter or to buy a rotten borough in Cornwall or give balls in St. James Square". An unscrupulous careerism was rampant. Bribes, perquisites and exactions were the order of the day. For instance, the elevation of Mir Jafar to the throne in 1757 was made the occasion for claims, by all, including even the members of the council who administered Bengal, amounting to £26,97,750 of which a third was taken in jewels and plate, there being no coin or specie left. Much the same state of things that obtained in Bengal prevailed also in the Carnatic. The guileless Nawab of Arcot fell a victim to fictitious debts. The notorious case of Paul Benfield, himself a

Oppression
and Misrule

petty servant of the Company, who claimed an assignment of the entire revenues of Tanjore is too well known to need mention. Deceit and oppression went hand in hand. It is to these days that we have to turn our attention to find out how the weavers and the other artisans of our country suffered.

India experienced the worst effects of Rule by rule by the most dreadful of all Monopoly. systems of monopolies. The increase of the trade of the Company and with that of the private trade too, and the provision for the Company's "investment" in Europe—which represented millions of pounds spent in purchasing goods from out of the proceeds of the Indian revenues and in shipping them to England to be sold out for profit there in order to pay salaries to the Company's servants, meet dividend and interest claims and also debt incurred in waging trade wars and wars of conquest in India—led to the harassment of the weavers and the Indian merchants. Though certain kinds of Indian calicoes were prohibited in England for personal use and wear, there were others like muslins, plain chintz and the baftas of Bengal which did not come under the prohibition, and even those that did actually fall under the prohibited category were in great demand for the purpose of re-export. English merchants were only too anxious to retain the

monopoly in the cotton trade and the result was that all the evils which usually follow in the train of a monopoly were seen in full force. Mr. Richards in a publication of his in 1813 gives the following lurid description of the ordinary course of proceeding of the Company's commercial servants about the year 1796 in Surat, "that the Surat investment was provided under the most rigorous and offensive system of coercion; that the weavers were compelled to enter into engagements and to work for the Company contrary to their own interests and of course to their own inclinations choosing in some instance to pay a heavy fine rather than be compelled so to work; that they (weavers) could get better prices from Dutch, Portuguese, French and Arab merchants for inferior goods than the Company paid for standard or superior goods; that this led to constant contests and quarrels between the agents of the foreign factories and the Company's commercial residents and to evasion and smuggling on the part of the weavers for which on detection they were subjected to severe and exemplary punishment, that the object of the commercial resident was, as he himself observed, to establish and maintain complete the monopoly, that in the prosecution of this object compulsion and punishment were carried to such a height

as to induce several weavers to quit the profession, to prevent which, they were not allowed to pass out of city gates without permission from the English chief; that so long as the weavers were the subjects of the Nawab frequent applications were made to him to punish and coerce weavers for what was called refractory conduct, and when severity was exercised towards them the Nawab (who was but a tool in the hands of the British Government) was desired to make it appear as the voluntary act of his own government and to have no connection with the Company or their interests lest it should excite ill-will or complaint against the Company's servants; that to monopolise the piecegoods trade for the Company at low rates, it was a systematic object of the resident to keep the weavers always under advance from the Company to prevent their engaging with other traders; while neighbouring princes were also prevailed on to give orders in their districts that the Company's merchants and brokers should have a preference over all others and that on no account should piecegoods be sold to other persons; that subsequently to the transfer of Surat to the British Government, the authority of the Adaulat was constantly interposed to enforce a similar series of arbitrary and oppressive acts." A similar course of

arbitrary proceeding prevailed throughout the other territorial possessions of the Company. Bengal had the worst of it and, in the words of Mr. Boults, there was enacted in that province, "one continued scene of oppression the baneful effects of which were severely felt by every weaver and manufacturer." The system pursued in making the purchases of cloth gave room to every kind of petty tyranny. The Banyas or agents employed by the Company went into the country with their gumastahs and the Governor of the province sent a *Perwanah* or letter to the Zemindar or other ruler directing him to be of assistance to the Company's agents. "The gumastah on his arrival in the manufacturing town fixes his cutcheri to which by his peons and hirkarahs he summons the brokers called the Dalals and Pykars together with the weavers; whom after the receipt of the money despatched by his master he makes to sign a bond for the delivery of a certain quantity of goods at a certain time and price and pays them a part of the money in advance. The assent of the poor weaver is in general not deemed necessary, for the gumastahs when employed on the Company's investment frequently make them sign what they please. A number of these weavers are usually registered in the books of the Company's

gumastahs and not permitted to work for any others, being transferred from one to another as so many slaves subject to the tyranny and roguery of every succeeding gumastah. The roguery practised in the warehouse department is beyond imagination, but all terminates in the defrauding of the poor weaver for the prices which the Company's gumastas and in confederacy with them the Jechandars fix upon the goods are in all places at least 15 per cent and in some even 40 per cent less than the goods so manufactured would sell for in the public bazaar or market upon a free sale." (Boults *Considerations*.) It was thus obvious that the weavers were constantly oppressed being bound down to make deliveries to the Company exclusively. The practice in Bengal was also the practice in South India. One typical extract from the records of the Madras Government would serve amply to illustrate the devious methods employed to secure goods for the Company's agents. On the Nawab of Arcot diplomatic pressure was brought to bear and he issued or rather was obliged to issue the following circular in 1732 to his subordinate officers. "The coming of the Governor of Madras to your country to buy cloth is the occasion of my writing this, to let you know it is my will you give strict order to all merchants in your part

to sell such goods as are proper to the Governor of Madras only and to his people and that they immediately deliver whatever cloth they have ready to his gumastas. *What they refuse you permit them to sell anywhere.* Take care that none buys such goods in your part but *his people*, for this is my strict command and take penalties from your merchants to perform the same." This type of letter was frequently addressed by the Nawab to assist the Company's exploitation. After more territory was acquired in Madras the same tyranny continued and it is recorded on the faith of the highest official authority years after in Lord Wellesley's well-known letter of the 19th July 1814 to the Madras Government, that most arbitrary proceedings were adopted to promote the Company's commercial dealings and to throw obstacles in the way of private enterprise fatal to the interests and pursuits of the regular and more legitimate traders of the country. Prices and deliveries were arbitrarily fixed. On the weavers refusing to take money offered to them in return for their articles, "it has been known that they have been tied in their girdles and sent away with a flogging." The prices paid by the Company were much less than what could be got and the weaver was compelled to accept them. Even the great famine of 1770 which laid waste thousands of

houses in Bengal and elsewhere did not put a stop to the cruelties of the Company's servants and when Warren Hastings enquired into the grievances and abuses of the people two years after, he wrote "that there were general cries of oppression from the people and the most authentic representations in support of them, yet it was impossible to obtain legal proofs in most cases". And Hastings was of opinion that power should be given to the Governor to recall peremptorily any person from his station without assigning reasons for such a recall.

Corruption and extortion were rampant throughout the company's possessions and as if to back them up by legal sanctions there were a number of regulations framed to legalise the immoral control and restraint under which the weaver population was held. It was provided that a weaver who had received advance from the Company should on no account give to any other person whether European or native either the labour produced or engaged to the Company, that on his failing to deliver the stipulated cloth the commercial resident would be at liberty to place peons on him in order to quicken his delivery. Placing a peon meant a fine of one anna per day on the weaver. The weaver was held in perpetual bondage. It was provided that on his

Regulations
Legalise
Oppression.

selling cloth to others the weaver shall be liable to be prosecuted in the Diwani Adaulat, that weavers possessed of more than one loom and entertaining one or more workmen shall be subject to a penalty of 35 per cent on the stipulated price of every piece of cloth that they may fail to deliver according to the written agreement. The weaver could not even if he chose remain a free agent and one regulation enjoined landlords and tenants not to hinder the commercial officer from access to weavers. These barbarous and vexatious restrictions sought to strangle local industry and subject it to the control of the alien traders. Thomas Monroe who knew all about the oppression of the weavers stated in evidence in 1813 before the Parliamentary Committee that the Company's servants were in the habit of assembling the weavers and placing them under guard until they entered into engagements to supply the Company's servants. The weavers slaved as it were under an indenture and Boults mentions that on one occasion there was a proposal to divide the weavers between the Dutch and the British merchants but fortunately for them such an open and shameless proceeding as a "partition" did not get the approval of the Court of Directors. Reliable and continuous testimony records that the weavers were frequently subjected to heavy penalties and fines and often

to flogging. They were at times put in stocks and humiliated by being marched through the streets in fetters. Their utensils were seized in realisation of unjust fines and often even for daring to sell their goods to other than the Company's agents. Boults exclaims against the "various and innumerable methods of oppression which were daily practised by the Company's agents and gumastas in the country such as by fines, imprisonments, floggings, forcing bonds from them, etc., and by which the number of weavers in the country has greatly decreased." The Company's merchants were treated not a whit better and were compelled to take the broad cloth from Europe at the Company's prices and introduce it into the Indian market though it was not easily saleable in the country. Talboy. J. Wheeler mentions at various places in his book on *Madras in the Olden days* how the Company's merchants were called in frequently and being threatened with heavy penalties were compelled to enter into onerous engagements which they knew they could not keep.* Coercion was freely and fully employed to get the Company's interests advanced in the country.

* The Nawab of Bengal in a letter of March 1762 complains that the Company's agents forcibly take away the goods and commodities of the ryots, merchants, etc., for a fourth part of their value and by ways of violence and oppression they oblige the ryots to give Rs. 5 for goods which are worth but Re. 1.

What has been detailed above gives us a glimpse into the methods used by the Company to secure the monopoly of the inland and export trade in cotton goods in their own and neighbouring territories. To sum up they were as follows :—

How the
Company
Operated.

(1) Merchants were strictly prohibited from sending gumastas into the interior to purchase or provide any goods without a *perwanah* from the Governor, while the Company's gumastas spread themselves over the country and committed countless oppressions.

(2) Bonds or muchilikkas which were taken by the Company's gumastas from the weavers left the weavers no choice but to supply the Company's servants at the latter's price.

(3) Fines, floggings and other penalties levied on the weavers.

(4) Forcible seizure of goods both from private merchants and weavers.

(5) Heavy transit duties on inland trade carried on by private merchants.

The result of all this was that for years local manufactures were subject to grievous and vexatious restraints and weavers were compelled to work exclusively for the Company at low wages. They often preferred to give up their occupation and take to precarious pursuits for a living. To mention only one instance, Mr. Boults testifies to the fact "that 700

of weavers in the districts round Jungulcarry at once abandoned their country and professions on account of oppressions which were then commencing." He also mentions cases of winders of raw silk called *Nagaods* known to have cut their thumbs to prevent their being forced to work. In Bengal as the commerce was rich and extensive, the consequences of the oppression were terrific. Harry Verelest, Governor of Bengal, in his letter dated 17-3-1767 notes "the uncommon scarcity of weavers" and proceeds to say "whether this proceeds from the troubles in which the country was so lately overwhelmed or whether it arises from the general decline of trade at all ports of India, it is certain that a great number of manufacturers in cloth have deserted their professions to seek for subsistence from a less precarious calling." Many a market was ruined in consequence of growing persecution. Indigenous industry was thoroughly dislocated in parts as a result of terrorism.

Yet spinning and weaving still continued to be the staple industries of India. Far from languishing they seem to have flourished quite as prosperously as ever in certain parts of the country. General Orme writing in 1782 records his observation that on the coast of Coramandel and in the province of Bengal

Spinning and
Weaving
1800—1805.

when at some distance from the high road or principal market town it is difficult to find a village in which every man, woman and child is not employed in making a piece of cloth. "At present," he continues, "the greatest part of this province (referring to the Circars) is employed in this single manufacture. It is further remarkable that every distinct kind of cloth is the produce of a particular district in which the fabric has been transmitted perhaps for centuries from father to son—a custom which must have conduced to the perfection of the manufacture". The cotton manufacture was then bound up according to the General with the lives of half the inhabitants of Hindusthan. "Spinning and weaving were the lightest tasks which a man could be set to and the numbers that did nothing else in the country were exceeding. The weavers did their work in open air and the assistance which a wife and family were capable of affording to the labours of the loom contributed very much to the preference given to the cotton manufacture. The weaver among the Hindu is no despicable caste. He is next to the scribe and above all the mechanics, and he would lose his caste were he to undertake a drudgery which did not immediately relate to his work." While weaving as a pursuit was held in high esteem and was seen to be prosperous,

spinning kept pace with it being universal and widespread.

Fortunately for us we have the elaborate and detailed economic survey of Dr. Buchanan made in the years from 1806 to 1810 which covers large areas in South India such as Mysore, Canara and Malabar and the provinces of Bengal* and Behar. The following table presents a few salient features culled out from the statistical inquiry that the Doctor made in Northern India.

For South India Dr. Buchanan has left no detailed and exhaustive statistical surveys, but from what he notes, it is fairly certain that the country abounded in spinners and weavers. But before we proceed to look into the conditions in South India it would be well

* As to the commerce of Bengal about the year 1805 Dr. Millburne's volumes on Oriental Commerce furnish valuable evidence. The following fabrics were manufactured in large quantities throughout Northern India.

Baftas :—Patna, Tanda, Chittagong, Allahabad, Beerbhoom, Koirabad, Luckapore.

Cossas :—Patna, Tanda, Allahabad, Hurrial, Santipore, Mow, Lucknow.

Doreas :—Chanderconnah, Tanda, Dacca, Santipore, Hurripaul

Mammoodies :—Tanda, Allahabad, Koirabad, Johanna, Lucknow.

Mulmels :—Dacca, Patna, Santipore, Ghazipore, Midnapore, Cossi, Molda.

Sannoos :—Tanda, Allahabad, Kohannah, Mow, Balasore.

Terrindams :—Dacca, Sanitpore, Casmabad, Buddawal, Hurripaul.

District.	Population.	No. of Spinners.	Total Value of Thread in Rs.	Average Annual Earnings of Spinner in Rs.	Carder's Annual Earnings (for man and wife.)	No. of Looms.	Value of Cloth made.	Annual Earnings per Loom in Rs.
Patna (Behar)	3,364,420	320,426	2,367,277	3 4 0	Rs. 36 (for family man and wife.)	21,522	2,438,621 (coarse cloth only)	28 4 0 to Rs. 58
Shahabad	1,419,520	159,500	1,250,000	1 8 0	...	8,778	1,634,000	48 to 53 Rs
Bhagalpur	2,019,900	160,000 (very low estimate)	594,600	4 0 0	...	7,279	832,440	Rs. 32
Gorakhpur	1,989,314	175,600	1,106,250	2 8 0	...	6,114	522,840	Rs. 23 8 0 to 36.
Dinajpur	...	...	1,165,000	3 0 0	...	...	100,000	Rs. 36 to 40
Purnea } & Rangpur }	2,904,380 2,735,000	... ...	... ...	from 3 to 9 Rs (fine spinning done here)	... ...	3,500 (On fine cloth)	1,300,000	...

72 HAND SPINNING AND HAND WEAVING

to study the position of the industry as evidenced from the table given above. What appears most obvious is the fact that there was at least one wheel working for every ten men, women and children in the population. If we include only the adults, the proportion would be much higher. The vast majority of homes, possibly not even one excluded, took to spinning as an occupation to fill idle hours and supplemented their agricultural and other incomes with earnings thereby. This

These were sent to all parts of India, U. S. A. and to all parts of Europe. The extent of the commerce was as follows :—

FOR THE YEAR 1805.

Commerce of Bengal with Place	Imports (consisting mainly of treasure) Sicca Rs.	Exports of Piecegoods. Sicca Rs.
1. London	67,722	3,31,582
2. Denmark	2,135	3,37,632
3. Lisbon		12,13,353
4. U. S. A.	25,096	47,63,132
5. Ceylon		1,03,944
6. Sumatra		85,089
7. Coast of Coramandel	1,15,390	4,07,942
(consists of goods mainly)		
8. Gulf of Persia & Arabia		8,45,788
9. Pegu		82,254
10. Pulo Penang and the Eastward.		8,16,612
11. Batavia		9,15,996
12. China	1,22,127	3,79,469
(Export of cotton to China was for 28,74,616.)		

brought no little addition to the home ; for, their earnings usually varied from Rs. 2 to 4 a year per spindle, which would, measured in present money values, amount to Rs. 10 to 20. * There were few whole time spinners and those who did full time spinning as in the Dinajpur and Rangpur districts made as much as $11\frac{1}{2}$ to 12 annas a month or nearly Rs. 9 a year, which again rendered into present money values would represent Rs. 45 or thereabout. But the usual practice was to spin when the women had no other work to do. The women obtained cotton either grown on their farms or bought in the weekly markets and it was usual for them to get it carded by the local *dhunayi* who was paid sometimes in cash and sometimes in kind. In one day, the carder gave $4\frac{1}{2}$ lbs. of lint and received as wages $6\frac{3}{4}$ seers of grain. For fine spinning the women usually carded their own cotton with the small hand-bow which spinners use even to this day †. The carder was in most cases a Mussalman or a low-caste Hindu. The spinners together with the carders, cotton retailers and the hand-ginners covered a seventh part of the population. The weavers were not less numerous if we take account of them along with their families. The weaving

* To-day the spinner's annual earnings in most areas is much the same.

† The women of Purnea who spun fine thread did it on the tukwa or spindle.

trade was the busiest occupation in the land and if the allied and subsidiary industries of embroidery work, dyeing and printing, all of which according to Dr. Buchanan were so common and paying, be taken together with it, it may be safely asserted to have filled the lives of one in a hundred to the population, putting it at the lowest. The weaver earned a handsome wage and when he did whole time work he could make as much as Rs. 108½ a year or measured in present money values Rs 540 to 550. Some of the weavers had also field labour to do. They were cultivators and during the slack seasons of the year they took to weaving as a by-pursuit. "Many of the farmers of both Hindu and Mussalman sections of the population," says Dr. Buchanan, writing of the district of Dinajpur, "have a loom in their house, both men and women work at it when they have leisure, and make thick coarse cloths such as gaziz, goras, etc." The weavers who worked for wages had a profitable living and were usually above want. Slowly the Company's agents began to exert pressure on them and sought to enslave them by the system of advance the injurious effects of which were far too apparent not to be noticed by an inquirer like Dr. Buchanan. Everywhere he observed the same phenomenon that the weaver functioning as a free agent and working on his

own account was in a much better condition than his neighbour who had received advances and worked for the Company's agents or servants. "There can be no doubt," says the Doctor, "that this system of advance in itself is ruinous to both farmers and artisans as conjoined with the usual imprudence of mankind it is an effectual means of preventing the accumulation of capital in their hand; and without this accumulation it is utterly impossible that they should possess any independence or ease." Apart from the general theoretical consideration that it prevented the accumulation of capital, the system destroyed the habits of prudence and economy. There were practical hardships involved in making deliveries and accepting prices fixed by the Company's men *. At Malda for instance the Company's agents engaged several looms according to Dr. Buchanan and though advances were paid the result in the end was that the weavers suffered considerably and their number declined. The custom of receiving advances involved many of the weavers in debt, from which it was not easy for them to extricate themselves. Even in the face of these conditions "the cotton manufacture was more thriving, more important and less

* Note that Buchanan's survey is not for districts near the coast in Bengal where the oppression of the weavers was the worst.

liable to fluctuation than any other because by far the greater part of the commodity was consumed locally in the very areas where the cloth was manufactured and the weavers could not have suffered materially even if the exportation had ceased altogether, for, still they could apply themselves to work in goods that would suit the local demand". As the cloth was generally bought for ready money on market days, the weaver had no lack of employment at any time.

It would be well to notice the information gathered by Dr. Buchanan pertaining to the cost of living of various grades of families specially in respect of food and clothing. The analysis made by the Doctor in the Dinajpur district may be more or less applicable to the other districts of Northern India. There were at least six different kinds of families with varying standards of living in that part of the country. The accompanying table gives the results of Dr. Buchanan's analysis:—

Standards of Living.	Cost of food in rupees.	Cost of clothes in rupees.
Family Clan (Usually of five members.)		
I	334 13 0	210 0 0
II	174 0 0	72 0 0
III	128 0 0	37 8 0
IV	66 0 0	17 12 0
V	30 0 0	3 6 0
VI	20 10 0	2 6 0

The last two represented the poorest type of farm labourer and artisan. But the middle

classes and the better type of artisans had plenty of clothing and the proportion of their clothing expenses to their food charges was as one to three. In most cases the families spent little on the purchase of clothing, specially the poorer ones for they had all their yarn made in their homes and woven in their neighbourhood.

In South India the conditions were very much the same as in Northern India. If anything, trade was busier than in North India and the number of spinners and weavers fabulously large. In the Mysore province "the women of all castes except the Brahmans took to cotton spinning as the principal occupation for leisure hours." In the district of Coimbatore Dr. Buchanan records that all the women of the low castes were great spinners and the thread of the Pariah was easily reckoned the best. At every weekly market in South India cotton yarn and cotton cloth were the principal objects of merchandise. From the Ceded Districts and even from beyond, merchants came into Mysore for selling cotton and buying cloth. The Coast of Coramandel, the Circars and the interior districts of Salem and Coimbatore were the great emporiums for the cotton trade and cloth manufacture and everywhere there were seen agents of the Company paying advances to weavers

South India
and Mysore.

and purchasing muslins, calicoes, paracalas and other varieties of cloth to be shipped to Europe. In fact the chief duties of the Collectors of Salem and Coimbatore seem to have been the collection of cloths for export. Generally speaking the conditions in South India were similar to those in Behar and Bengal, with one or two important differences. The higher caste women, in South India, specially the Brahmans, seemed to have been as averse to spinning "as their husbands were to holding the plough," whereas in Northern India no caste was considered to be degraded by spinning. The spinners' earnings were just the same as in the North. Their speed usually varied from 100 to 600 yards per hour according to the fineness of the thread. When of the finest quality, presumably over 100 counts, the woman could do no more than 1 hank of 840 yards per day; when of very coarse quality she could make three-fourths of a seer and earn more than $1\frac{1}{2}$ d. a day, her speed ranging from 500 to 600 yards per hour. Every process anterior to spinning viz., ginning, carding, cleaning, was done by the woman herself in South India. There are no carders mentioned anywhere in Buchanan's records of South India. It is just possible that carding was neither paying nor popular as a profession as in Bengal and Behar and the spinner combined in herself

the role of the carder too. The prices of the cloth in North and South India were every where the same except that in respect of muslins and thin cloth the prices were more favourable in the Southern districts than elsewhere. The Bengal baftas and the coarse cloth of Coimbatore sold at almost equal prices. It is unfortunate that Dr. Buchanan left no complete statistical account of the Southern Districts which he first visited and surveyed. But the general condition of things portrayed lead to the one conclusion that neither foreign cloth nor foreign yarn had made any impression on the people. Foreign yarn was completely unknown while foreign cloth was not in demand anywhere except "in the houses of a few residents in the towns".*

*We learn from Millburne's *Oriental Commerce* that the East India Company's staple article of export from Madras was piecegoods during the years 1792-93 to 1808-09. The varieties manufactured usually imported into England and America were Pulicat handkerchiefs, Vettapalam handkerchiefs, blue cloth, Punjam cloth, sarees, salampores palampores, chintz, book-muslins, muslin handkerchiefs and gingham of all kinds. The extent of the commerce in Madras 1805 was as follows :—

Place	Import of piecegoods Rs.	Export of Piecegoods. Rs.
1. London	13,000	1,46,811
2. U. S. A.		12,44,494
3. Bombay	74,749	88,570
4. N. Circars.	19,180	5,59,146
5. Coast of Malabar	96,905	1,05,828
6. Bengal	3,37,546	89,400
7. Penang and Eastwards.		9,25,892

With all parts of the world the commerce of Madras in piecegoods, cotton, and cotton thread stood as follows :—

Article	Imports Rs.	Exports. Rs.
1. Cotton	2,51,458	1,75,416
2. Yarn	55,114	8,645
3. Piecegoods	20,44,582	53,66,171

Of the piecegoods imported very little came from foreign countries. Mostly the import was from the interior and the northern provinces.

It is clear from Dr. Buchanan's evidence that people of all classes found profitable occupation for their spare hours during those years and the pressure upon the resources of the soil was not heavy. The excellence of the local manufactures continued to be manifest and it was this above all else as emphasised by Warren Hastings deposing before the Parliamentary Committee in 1813, which precluded the extension of the consumption of European articles in India. All the clothing necessary for the people was manufactured and marketed in the country and its amazing cheapness which struck foreign observers so much made it impossible for articles from other countries to compete with the indigenous product. The figures in pounds of goods sent from England to countries East of the Cape of Good Hope, mainly to India, during the years from 1800-13 show the negligible

demand there was for British and foreign manufactures in the country.

Year	Value of British Goods
	imported. £
1800	19,575
1801	21,200
1802	16,191
1803	27,876
1804	5,936
1805	31,943
1806	48,525
1807	69,041
1808	1,18,408
1809	74,695
1810	1,14,649
1811	1,07,306
1812	1,08,824

For the first time it was only after 1808 that the imports into India of British goods reached the figure of £ 1,00,000. The export trade of India in piecegoods had no doubt fallen considerably and from 1800 to 1826 the number of bales sent out from this country hardly exceeded 2,000 on the average. Heavy prohibitive duties were levied upon Indian goods and there was seen a progressive decline in the trade. However, English cotton goods could hardly be popularised in the country in spite of hard and persistent endeavours to do so, much less foreign cotton twist which

found its way for the first time into India only in 1823.

It must not be forgotten that it was during these very years that cotton manufacture in England had taken tremendous strides, the inventions, made during the successive years in the sixties and seventies of the previous century, (the fly shuttle in 1760, the spinning jenny in 1764, the power loom in 1765 and the steam engine in 1768) having been perfected and set in full motion by the new capital which had accumulated in the shape of hoards of gold from India. It has been said that but for the driving power supplied by the capital from India, the inventions, remarkable as they were, would possibly have lain dormant for generations. India's misfortune was England's opportunity. The Pagoda tree had literally been shaken years before and the influx of ill-gotten treasure from India with the enormous expansion of credit facilities that followed as a consequence, gave an impetus to the rising industry of Britain. A persistent effort was made to find out a market in India for British cotton piecegoods. Napoleon's blockade of England and his continental system made British merchants press on the Indian market. A parliamentary enquiry in 1813 was conducted to promote the interests of the manufacturers

Heavy
duties and
Indian
Goods.

of England. Every distinguished administrator who knew the condition of the subject territories from Warren Hastings to Sir Thomas Munroe was asked to state if English cottons would sell in India. It came out in evidence before the Select Committee of Parliament that the idea was not feasible chiefly because of the great disparity in prices between the English and Indian fabrics. "It was only a question of price," said Sir Thomas Munro. Mr. Robert Browne speaking before the Lords Committee stated that the finer descriptions of piecegoods from India, if permitted to be imported without the payment of duty, would certainly interfere very much with British goods, while in the case of coarser goods from India the interference would be by far the greatest in consequence of the low price for them and the greater price of the same description of goods of British manufacture. Mr. Robert Browne was asked, "Can you state the difference between the price which British white calicoes from the manufacturers fetch per yard and that at which Indian white calicoes of nearly the same dimensions and quality sold at the March sales of the Company?" His answer was, "From a calculation I have recently made I find that the difference is from 30 to 60 per cent less than the same qualities, width and descriptions could be bought from the manu-

facturers." The British markets could not be thrown open to Indian goods free of duty because of the certain risks to the English manufacturers. No one advocated the abolition of the heavy duties to which Indian goods were subjected, for then English manufactures would have been ruined. Lord Wellesley speaking in the House of Lords in 1812 voiced this general fear that, if the British markets were thrown open free of duty to the Indian goods, they would supplant the cotton manufactures of the country and would essentially interfere even with their domestic consumption." Indian goods sold at prices from 50 to 60 per cent less than similar goods made in England. Heavy protective tariffs of 70 to 80 per cent had to be levied on calicoes to prevent their import into England. *Laissez faire* was not yet and was the talk of a latter day when British manufactures were placed on an unassailable foundation and had no competition to face. But all this time the greed and selfishness of the exploiter were such that the Indian ports were open to British goods practically free of any duty at all. It was the essential injustice of these one-sided duties that excited the historian Wilson into a bitter condemnation of British policy. Here are his words: "The history of the cotton trade with India affords a singular amplifi-

cation of the inapplicability to all times and circumstances of that principle of Free Trade which advocates the unrestricted admission of a cheap article in place of protecting by heavy duties a dearer one of home manufacture. It is also a melancholy instance of the wrong done to India by the country on which she had become dependent. It was stated in evidence in 1813 that the cotton and silk goods of India up to the period could be sold for a profit in the British market at a price from 50 to 60 per cent lower than those fabricated in England. Consequently it became necessary to protect the latter by duties 70 to 80 per cent on their value or by positive prohibition. Had this not been the case, had not such prohibitory duties and decrees existed, the mills at Paisley and Manchester would have been stopped at the outset and could scarcely have been set in motion even by the power of steam. *They were created by the sacrifice of the Indian manufacture.* Had India been independent she would have retaliated, would have imposed prohibitive duties on British goods and would then have preserved her own productive industry from annihilation. This act of self-defence was not permitted her; she was at the mercy of the stranger." It was all the Rob Roy formula, those should take who have the power, those should keep who can. India could not contend against selfish

commercial principles which prescribed a policy of unequal duties. After the year 1813, the Indian trade was thrown open to all Britishers and the Company's monopoly was abolished. The facilities given to British imports into India were numerous. The import duties were reduced to $2\frac{1}{2}$ per cent ad valorem and many of the staple articles were admitted free. Transit duties on them were modified and even drawn back in many instances. The inland duty on cotton was taken off. Cotton exported to England was not subject to any charge. While this was so, every obstacle was placed in the way of Indian goods finding a sale in India. In this unequal struggle, the stronger party succeeded easily. The secret of the success of the English adventurers lay not so much in the overcoming power of higher skill and greater capital as in the operation of the scale of unequal duties—a small duty for England and heavy duties for India—cleverly adjusted so as to elevate the one party and depress the other. Mr. Richards, one of the well-wishers of the East India Company who also gave evidence before the Select Committee, wrote about the unfairness and injustice of the duties levied on Indian imports. He said, “the system of duties on British goods imported into India compared with those of Indian goods imported into Britain, both being

equally the property of the British subjects, is liable to this inconsistency that British staples imported into India are admitted duty free, whereas Indian produce is charged with enormous duty in this country, many articles of ordinary consumption being subject to duties exceeding 100, and from that up to 600 per cent, while one article as high as 3000 per cent." The tariffs stood varied from time to time and were not taken off till it was found that the Indian export trade in cotton piece-goods had for all practical purposes died out, never to rise again. It is interesting to note the level at which the tariffs were kept during various years.

Year	for every 100 £ value		Articles of	
	White calicoes.	Muslin and Nan-keens	Dyed and Printed goods Prohibited	Cotton Manufacture not otherwise charged
1797	£ 18 3 0	£ 19 16 0		
1798	£ 21 3 0	£ 22 16 0		
1799	£ 26 9 1	£ 30 3 9		
1802	£ 27 1 1	£ 30 15 9		
1803	£ 59 1 3	£ 30 18 9		
1804	£ 65 12 6	£ 34 7 6		
1805	£ 66 18 9	£ 35 1 3		
1806	£ 71 6 3	£ 37 7 1		
1809	£ 71 13 4	£ 37 6 8		27 6 8
1812	£ 73 0 0	£ 37 6 8		
1813	£ 85 2 1	£ 44 6 8		32 9
1814	£ 67 10 1	£ 37 10 0		32 10
1825-32	10 per cent advalorem duty			
	and an additional 3½ per cent per sq. yd. if printed			20 0 0
1846	repeal of the £ 10 duty.			

88 HAND SPINNING AND HAND WEAVING

A comparison of the figures of the import and export trade at different periods with the tariff rates then prevalent will disclose the process of suppression of Indian by British manufactures.

Year	Export from India in pieces.	Tariff rates.	Import from Britain in yards.
1814	12,66,608	{ £ 37 on muslins £ 67 on calicoes £ 27 $\frac{2}{3}$ on other goods.	8,18,208
1821	5,34,495	{ £ 37 $\frac{1}{2}$ on muslins £ 67 $\frac{1}{2}$ on calicoes £ 50 on other goods	19,138,726
1828	4,22,804	£ 10 duty	42,822,077 $\frac{1}{2}$
1835	3,06,086	„	51,777,277

Tariff in India 2 $\frac{1}{2}$ percent

English goods flooded the markets of India being imported on the principle of Free Trade, while Indian manufactures were shut out and subjected to heavy and prohibitive duties. These latter were taken off and relaxed when the Indian export trade had practically ceased and British production considerably cheapened.

The British trade in cotton goods protected in England and let loose on India began to expand from the year 1813. The figures for cotton goods exported from India and for cotton goods imported into India from European countries during the years 1813 to 1833 (the period of the operation of unequal duties) show how the former

Position of
Trade in
1813-33

declined steadily only to give place to the latter.

Year	Cotton Goods exported from India. Rs.	Cotton Goods imported into India Rs.	Cotton Twist imported.
1813—14	52,91,458	92,070	
1814—15	84,90,700	45,000	
1815—16	131,51,427	2,68,300	
1816—17	1,65,94,380	3,17,602	
1817—18	1,32,72,154	11,22,372	
1818—19	1,15,27,385	26,58,940	
1819—20	90,30,796	15,82,353	
1820—21	85,40,763	25,59,642	
1821—22	76,64,820	46,78,650	
1822—23	80,09,432	65,82,351	
1823—24	58,70,523	37,20,540	
1824—25	60,17,559	52,96,816	
1825—26	58,34,638	41,24,159	1,23,146
1826—27	39,48,442	43,46,054	75,276
1827—28	28,76,313	52,52,793	8,82,743
1828—29	22,23,163	79,96,383	19,11,205
1829—30	1,32,423	52,16,226	35,22,640
1830—31	8,57,280	60,12,729	15,55,321
1831—32	8,49,887	45,64,047	31,12,138
1832—33	8,22,891	42,64,707	42,85,517

By 1833 Indian exports had become negligible while British cloth and twist penetrated Indian markets and captured a portion of them permanently.

Not only was the Indian export trade killed by unfair means, but heavy inland transit duties and diverse other oppressive taxes were levied

Exactions of
of the Toll-
House.

on the country's manufactures in India. Under the rule of the Nawabs and other Indian potentates there were duties no doubt but they partook more or less of the nature of a toll.* The charges were so much per ox-load, pony-load, cart-load, etc., without reference to the value of the goods. The customs were generally so light that there was no temptation to smuggle. There was no pass required and consequently on no pretext were searched goods at the customs house. The goods were subject to duties in proportion to the distance they were carried and the toll was paid by instalments as the merchant proceeded. But the British reversed the system completely. The merchant was called upon to take a pass on payment of the whole duty at once no matter to what distance he went. Under the name of consolidation of tolls (the standard fixed was the aggregate of all the tolls levied on goods proceeding to the greatest distances) an immense increase of the duty was secured. The cotton goods consumed in the country paid according to Mr. Ranking, a witness examined by the Select Committee of Parliament in 1843 transit duties to the extent of $17\frac{1}{2}$ per cent in some areas, 5 per cent

* Refer Sri John Frederic Shores' notes on "Indian Affairs" written in reviewing Sir Charles Trevelyan's report of 1834 on the abuses and malversations of the customs officers.

on the raw material, $7\frac{1}{2}$ per cent on yarn, $2\frac{1}{2}$ per cent on the manufactured article and finally another duty of $2\frac{1}{2}$ per cent if the cloth should be dyed in case the perwana or pass had been taken out for it as white cloth. Where business was carried on a large scale, it was not possible to escape these multiple duties as the materials had often to be brought in small quantities from considerable distances. Cotton had to bear duties four times before it was converted into cloth and if the manufactured article did not correspond with the pass taken out for the raw material it had still further to pay additional transit charges. The pass or the perwana which the merchant secured at the toll-house was often the occasion for the greatest annoyance. It was in force only for a fixed period and if the goods remained unsold at the expiration of that period the merchant had to procure a renewed pass. But this would not be given till he proved the identity of the goods. In most cases there was great difficulty in taking out passes and consequently there was a constant temptation to smuggling. An immense number of search-houses was set up to check smuggling and to compare the goods with the passes. Though the law prescribed that no search-house or chowky was to be located at a greater distance than 4 miles from the

custom-house in practice it was quite disregarded and the search-houses were spread all over the country, sometimes 60 to 70 miles distant from a customs-house. The vexatious restraints and the petty tyranny which the customs officers and the chowkidars brought to bear upon local merchants practically penalised the trade in many parts. Extortion was universally practised and articles which had to run the gauntlet of the custom-house and which had also to pass through numerous subordinate chowkies could hardly escape being subjected to repeated detentions. Those who knew intimately the practices of the custom-houses in India at the time declared that the vexatious annoyances and extortions practised in the British Indian provinces were infinitely greater than were experienced in Russia, Kabul, Peshawar or Bokhara. There were loud complaints from the impoverished people but no redress was forthcoming. The profession of the private merchant according to Sir Charles Treveleyan became both unpleasant and disreputable on account of the complete state of dependence in which the most respectable people were placed on the meanest customs-house officer. Exactions of the toll-house continued, despite frequent representations in Parliament. A huge system of oppression was maintained for the sake of an

insignificant revenue. The injustice involved in the levy of these duties was thoroughly brought out first in Holt Mackenzie's memorandum of 1825 and later exposed by Sir Charles Trevelyan and Lord Ellenborough in their reports to the East India Company in 1835. They were abolished only in 1836 in Bengal, in 1838 in Bombay, in 1844 in Madras and elsewhere in 1847. Six years later came the abolition of the Mutarfa tax, a tax described in a petition from Madras "as upon all trades and occupations embracing weavers, carpenters, all workers in metals, all salesmen whether possessing shops, which are also taxed separately, or vending by the roadside". Mr. J. W. B. Dykes, a Magistrate and Revenue Officer, who had himself collected the tax in Madras spoke about its oppressive character. "It is levied," he said, "upon almost every one who does not cultivate land. If an old woman takes vegetables to the market and sells them at the corner of the street, she is assessed for selling vegetables. If a man is a cloth merchant he is assessed. But no tax was levied on European traders. Perhaps next door to this man who is making a few rupees a year there is a European trader making hundreds but he pays nothing." The invidious nature of this petty tyranny could have had only one effect, that of undoing bit by bit the vast industrial organisation of the

country. The mutarfa was levied upon the most trifling articles of trade and also on the cheapest tools any mechanic could use. The spinning wheel too was subject to this tax, a fact brought prominently to the notice of the Select Committee of 1848 on Indian Cottons. The weavers' looms were taxed likewise. Dr. Buchanan in his review of South India mentions a stamp duty levied on looms against which the weavers of Satyamangalam, Dharmapuri and other places are reported to have protested. The collection of the mutarfa afforded a wide field for inquisitorial visits, extortions and oppression on all classes of mechanics, artisans and petty traders, a fact which was mentioned in the Madras petition to the House of Commons (1853).

India in the 19th century entered on her
slave age.
England's commercial
policy towards India was at first
prohibitive, then suppressive and
at last became repressive, setting bounds to
India's manufacturing skill. From the time
Britain acquired political power in India
she had worked with set purpose to destroy
Indian trade and industries. The means
adopted by her may be summed up as fol-
lows:—

1. Forcing of British Free Trade on India.
2. Imposition of heavy duties on Indian manufactures in England.

3. Heavy transit and customs duties on the internal trade of India.

4. The encouragement given to the free export of raw produce from India.

5. Forcing Indian artisans to work under diverse restrictions.

6. System of administering the Company's investments.*

7. Compelling Indian artisans to divulge their trade secrets.

By oppression in India and by the imposition of duties in England the manufactures of India were sought to be throttled. The import of raw cotton from India into England had increased, while the import of cotton goods from India into England had died out. British manufactures were slowly displacing the indigenous products in India. Weavers in many places were thrown out of employment and there was great distress. Before the Select Committee of Parliament appointed in 1840 to report on the removal of invidious duties which repressed and discouraged Indian industries, witness after witness spoke of the unfairness of levying a 10 per cent duty on Indian cotton goods imported into England while British cotton goods paid only a 3½ per cent duty in India. The course of

* Within 19 years from 1793 to 1812 it is stated that more than 25 million pounds of the country's revenues were spent on purchase of Indian goods for their exportation and sale in Europe without any commercial return being made to India.

events in India was such that it was easy to foresee the final suppression of her manufactures.*

The British industry had made rapid progress in the years after 1813. The power looms had multiplied to nearly a hundred thousand in 1833 while they were scarcely above two thousand, twenty years previously. Further the level of prices had come down enormously and in most cases Mr. Baines records that there was a fall of 25 to 80 per cent in the prices of yarn and cloth between 1812 and 1833. Production had cheapened greatly and with the markets thrown open in India it had all the advantages in its favour. A comparison of prices as they stood in 1833 between Indian and English yarns of counts above 40 shows that the position which obtained a score of years previously had been wholly reversed.

Count of Yarn.	COST OF YARN PER lb.	
	English. sh. d.	Indian sh. d.
40	1 2½	3 7
60	1 10½	6 0
80	2 6¾	9 3
100	3 4¼	12 4
120	4 0	16 5
150	6 7	25 6
200	14 6	45 1

Dr. Taylor writing about the Dacca manufacture recorded a comparison in prices bet-

* Dutt's *Economic History* Vol. II p. 101 etc. gives the important evidence of J. C. Melville, Charles Trevelyan, and Montgomery Martin.

ween indigenous and imported yarns in respect of counts above 30, which showed about the same results. The manufacture of finer counts in India perforce fell into disuse and what still persisted was the spinning of coarser counts. Coarse yarn continued to be spun and to take only one instance Dr. Taylor said that in Dacca in 1835 about $3\frac{1}{16}$ of the total strength of the country's looms was still conducted on the homespun coarse and medium yarns. Added to this cheapening of the British production and the large inflow of foreign yarn of finer counts, the opening up of communications some years later by means of railways facilitated the movement of the foreign product even into the inner most recesses of the land and accelerated the pace of decay in indigenous industries. The figures for the period between 1840 to 1879 constitute informing evidence as to how India became more and more dependent on foreign cloth, local production not being able to stand the tide of competition.

Years.	Cotton Piecegoods Indian Import (in Million sterling)	Raw Cotton Export from India (in Million sterling)
1840—44	3·19	2·34
1844—45	3·75	1·68
1850—54	5·15	3·14
1855—59	6·94	3·11
1860—64	10·92	15·96
1865—69	15·74	25·98
1870—74	17·56	17·41
1875—79	19·21	11·21

India became the exporter of raw cotton and increasingly the importer also of foreign cloth. Instead of being looked upon as a country famous for the exportation of elegant fabrics made by an industrious population, India was regarded only in the light of a cotton farm whose business should be to supply the raw material to England whenever it was required and take back her manufactured goods in any quantity that the makers chose to send. Nothing was done to protect the indigenous industry. On the contrary whenever there was an increase proposed in the import duties on cotton goods as was done by Lord Canning in 1857 there was hostile clamour in England raised against such suggestions. The very first finance minister who visited India after the Crown took over the government of this country, came out with instructions to revise the tariffs and allay British discontent. The import duties in India on foreign piecegoods were halved; the duties on imported twist were likewise brought down from 5 to $3\frac{1}{2}$ per cent. There was no disguising the real objective. Sir Bartle Frere an ex-Governor of Bombay admitted in evidence before the Commons Committee in 1871 that the direct result of raising the import duties on piecegoods and yarn would be to diminish their consumption and stimulate production on the

spot. It is outside the scope of our present inquiry to recount how in later years the nascent mill industry of Bombay roused the jealousy of Lancashire and how the latter succeeded in getting imposed upon the former in 1896 an excise duty unjust in the extreme. It is enough for us to note that the interests of India and England were at variance and the former were sacrificed to the latter.

From 4 to 4½ millions in 1879 the imports of foreign cloth have grown to more than ten times that figure in less than 50 years. This unprecedented rise in the imports has an interesting history behind it. The Indian market was thrown wide open for British producers to dump their goods. Every detail of the Indian market was studied with meticulous care; the desire to possess the secret of the Indian artist's success became stronger than ever. A persistent and strenuous effort was made to adjust the manufactures of Lancashire to suit the tastes of the people here and exploitation at every turn was assisted by official agency in India. After the international exhibition in 1851 Dr. John Forbes Royle was ordered to collect the products and manufactures of India in a museum in London at India's expense. This work of exploring the almost limitless capacity of the

British
Goods
Dumped
in India.

100 HAND SPINNING AND HAND WEAVING

Indian market to absorb the products of Lancashire was ten years later continued by Mr. Forbes Watson (Reporter to the Secretary of State on Indian Products) who brought out a treatise entitled "The Textile Manufactures and Costumes of India." It is probably with reference to this work that Mr. J. B. Keath an English officer wrote thus in the *Pioneer* of September 7th 1891. "Every one knows how jealously trade secrets are guarded. If you went over Messrs. Doulton's pottery works you would be politely overlooked. Yet under the force of compulsion, the Indian workmen had to divulge the manner of his bleaching and other trade secrets to Manchester. A costly work was prepared by the India House department to enable Manchester to take twenty-nine millions a year from the poor of India; copies were gratuitously presented to chambers of commerce and the Indian ryot had to pay for them. This may be political economy but it is marvellously like something else."

Every feature, colour and shade of Indian dress and clothing is vividly pictured for the benefit of the English manufacturers. The 700 specimens collected by Mr. Watson contained

Mr. Forbes
Watson's
Survey.

all varieties of local manufacture—dhoties, turbans, sarrees, muslins, chuddars, chintz, mixed cotton and silk clothing and clothes of

all descriptions—and in fact constituted a trade museum to be exhibited to and worked upon by the English manufacturer. They were to show what the people of India affect and deem suitable in point of textile fabrics. What was wanted and what was to be copied were made accessible for study. The work was done with thoroughness and precision and the dealers in cotton goods in Great Britain were told exactly what they could and could not sell in India, what they ought and ought not to produce for India. Nothing was omitted. The number of spots on the sari was as carefully noted as if they were so many spots in the sun. No detail of Indian clothing was neglected, the varying hues of the turbans, the length, texture and borders of the dhoties, the delicate art in the muslins, the light and brilliant prints and finally unpronounceable names of all sorts which Englishmen could not even have understood. The British manufacturer was not to look for his customers to the upper ten millions of India but to the hundreds of millions in the lower grades. The plainer and cheaper stuffs of cotton, he was told, were those which he had the best chance of selling and those which he would be able to sell largely if in their manufacture he would only keep well in view the requirements and tastes of the people to whom he offered them. “We know India

nowadays" writes Mr. Waston, "as a country whose raw products we largely receive. We pay for them partly in kind and partly in money, but India never buys from us what will repay our purchases from her and the consequence is that we have always to send out that large difference in bullion which never comes back to us disappearing there as if it had been dropped into the ocean. We buy her cotton, indigo, coffee and spices and we sell her what we can in the shape of textile and other manufactures. It must not be forgotten, however, that there was a time when India supplied us largely with textiles. She may never resume her position as an exporting manufacturer of piecegoods though what the extension of the mill system in India may eventually lead to it is difficult to say, and her friends would most unwillingly see its development fettered by restrictions of any sort. This is clear however, that it will be a benefit to the masses of the people of India to be supplied with their clothing at the cheapest possible rate---let this be done by whom it may. If Great Britain can give lungis, dhoties, sarees, calicoes to India which cost less than those made by her own weavers both countries will be benefited. In a great productive country like India, it is certain that she will gain, for, if supplies from Britain set labour free there it will only be to divert

it at once into other and, perhaps, more profitable channels." Time and experience have disproved this false prophet. A very unimaginative Englishman this, to say the least, who could not picture the general widespread desolation that the destruction of spinning and weaving was bound to lead to—millions of poor women no longer plying their wheels and turned out of an honourable occupation only to be left idle or forced out of poverty to seek out-door labour or other precarious living, and thousands of hand-loom weavers thrust into the double servitude of the Sowcar at home and the mill-owner abroad and compelled reluctantly to give up their looms and take to agriculture or even less stable pursuits, the very basis of village economy uprooted violently and all at once. Only one thing seemed clear to Mr. Watson that Great Britain could profitably send out her lungis, dhoties, sarees and calicoes. There was no attempt to conceal the ultimate aim, no disingenuousness in the language employed. "About 200 millions of souls form the population of what we commonly speak of as India" says Mr. Watson "and scant though the garments of the vast majority may be, an order to clothe them all would try the resources of the greatest manufacturing nation on earth. *It is clear therefore that India is in a position to become a magnificent customer.* She may still be

this and yet continue to seek her supplies from herself; for to clothe but a mere percentage of such a vast population we should double the looms of Lancashire. This is what might and may be but that which is greatly otherwise, for in point of fact India buys but sparingly of our manufactures."

Forsooth India was to become "a magnificent customer", all her industries were to languish and her busy artisan population to pine and waste away in misery, a prey to the continuing inroads of foreign and chiefly British commerce. But the immediate problem was how best to persuade India to buy. She was not buying in 1866 as much as the avarice of the foreigner would wish. The last flicker of the spinning industry had not yet been extinguished and the twist made in the country yet enjoyed a fairly wide sale and popularity not easily to be displaced. The Indian artisan still displayed that admirable skill in the arrangement of form and colour producing "those beautiful harmonious combinations which are to the eye what chords are to the ear." It was no doubt true muslins such as those made at Chanderi and Arni could then be got only in fulfilment of occasional orders. The market for fine cloth and fine yarn made in the country had nearly died out but for local patronage here and

India: "A
Magnificent
Customer."

there which served to preserve it from complete extinction. Captain Meadows Taylor tells us that at this period he saw a class of yarn similar to what was made in Dacca spun in rooms or cellars carefully closed and with the floors kept constantly watered, at Nander, Narianpet and other places near Hyderabad. Fine hand-spuncloth and yarn could still be got from the Coramandel Coast as well as at Arni and in the official report of the Central Provinces for cotton manufactures in 1867 this class of goods is stated to have been exhibited at Akola, Jubbalpore and Nagpur. This superfine yarn was not available in any large quantity but the country still held supremacy in loom-made brocades, hand-made embroideries and coarse clothing. Adverting to the first two classes of goods Mr. Forbes Watson said that there was little hope of England being able to make these cheaper than India herself but all the same he recommended their study to the home-manufacturers because even as a mere lesson in taste it would prove useful. The very fine and richly decorated fabrics of India require the delicate manipulation of human fingers for their production. The demand for them could not be wide and was local and even there mostly restricted. But in respect of the coarse clothing which the masses needed, the Indian handspinner and handweaver held the market.

They could still produce cheaper and more durable articles than anything the foreigner brought in. Cheap handmade coarse cloth was very popular in the country. Mr. Forbes Watson mentions one remarkable fact that though during the years of the American War owing to the forcing up of cotton rates the prices of indigenous cloth rose twice as much as goods of a similar class imported from abroad, the former were preferred by the poorer people to the latter.

The same fact was observed by the officers of the Central Provinces. Mr. Rivett Carnac is positive "that machine made piecegoods have not been able to drive out of the field the stout serviceable country cloth which stood the smashing of the native washerman and kept out the sun, the rain and the cold." Writing of one of the numerous weekly fairs held in the province at Chimmoor Pergamet Mr. Rivett Carnac notes that "an important article in the trade is coarse cloth the manufacture of which is entirely in the hands of Dheds who spin the thread and work the looms. The cloth is coarse and strong and is in great favour among the Kunbi cultivators of Berar to whom the comparatively flimsy but smart looking English cloth does not suit. In spite of a rise in price it is bought in quantities larger than ever by the prosperous Kunbis."

Khadi in
C. P. in
1870

Out of the 1114 stalls in the fair 521 sold cloth, only 5 having piecegoods made in foreign countries. There were more than 100 stalls of "Koshties" (fine weavers) who sold fine cloth while the Dheds had as many as 350 selling cloth of coarse manufacture. It is further recorded that the Dheds who were successful in disposing of their stocks supplied themselves with cotton for the next week's spinning and weaving from 25 cartloads of cotton which were stocked there for sale. In respect of fine spinning and weaving too we have some official account. The Akola exhibition a description of which is given by Mr. Rivett Carnac had in it such fine yarn, "that it was difficult to convince visitors that the yarn shown there was of native manufacture spun by the hand with the assistance only of the rude primitive looking spinning wheel." One piece of thread exhibited at Akola was of such fineness that a pound weight of it would have reached a distance of 117 miles *. The Dheds who spun the fine thread were particularly careful in the selection of the cotton for the purpose and always buying it with the seed they allowed no *charki* (handgin) to touch it or cause the least injury to the staple each seed being carefully removed by the hand. For the ordinary yarn of counts below 30 the cotton was ginned on the *charki*

* (over 245 counts)

108 HAND SPINNING AND HAND WEAVING

and was later bowed by the pinjarias. Thus both kinds of yarn fine as well as coarse were being turned out by the spinning classes but the position in respect of hand-spinning and weaving could not still be regarded as very secure. European goods were fast encroaching on the local trade and more especially was this the case wherever the railway line passed. From 1863 to 1867 the figures for the C. P. show that the imports of foreign cloth though slowly increasing represented much less than the cloth locally made and exported.

Year	Country cloth Exported (in maunds)	European Cloth Imported (in maunds.)
1863 -64	75,362	22,591
1864 65	54,277	58,496
1865 66	55,052	29,070
1866 -67	52,893	58,402

The Central Provinces Gazetteer of 1868-69 gives other figures for some of the districts, which are striking.

District	Imports		Exports	
	Country Cloth	English Cloth	Country Cloth	English Cloth
	Rs.	Rs.	Rs.	Rs.
Arvi	53,994	32,650	25,625	16,300
Deoli in Wardha	1,23,281	13,722	3,790	nil
Hinginghat	2,59,706	44,613	1,77,114	26,161

The district and city of Berhampur were great cloth marts and though no figures are available for the area it is noted that the

earnings of weavers therein were Rs. 5 to 10 a month besides what their families earned by spinning, dyeing and odd work connected with the trade. A weaver if out of work could always make common sarees and dhoties for which there was a steady demand and for which little capital was required. "The city thread is spun by the families of the weavers and others" says the Gazetteer "and the best thread being produced by the Dhed class, a coarser thread is generally spun throughout the country by women of every caste. The latter now greatly preponderates in quantity and it is said that every day the demand is getting smaller for fine qualities."

In Bombay things were not as bright. While in some districts handspinning
 Bombay in 1870 lingered, in others it had completely died out. In Gujarat owing to the opening up of steam factories at Ahmedabad the demand for handspun yarn had considerably declined. In Khandesh cotton spinning which was the chief employment of the women of the poorer classes had almost disappeared. But it was still found that in the districts of Surat and Dharwar almost the whole female population in town as well as in the country were engaged in spinning cotton thread both for home consumption and for sale. The yarn was used for the coarser varieties of cloth, in tapes for cots and for making

ropes. Among the country people the coarse cloth was the only wear. On account of the greater strength of the hand-made stuff as well as from the dislike to change many women even amongst the town people continued to use country-made cloth. Mostly women spun more than five hours a day and used cotton cleaned with great care specially for homespinning. They would see that no seed, dirt or leaf was left in the cotton (Vide Bombay Gazetteer 1879. The *Nulurati* in Dharwar is said to have costed Rs 2-4-0)

Medlicot in his cotton handloom book written a few years before 1870
 Bengal in 1870. records that cotton cultivation in Bengal was carried on strictly for local purposes only and that in the most limited sense of the term "for it seldom appeared for sale in the village bazaars but was spun by its actual growers and served to clothe them and their families after being worked up by the nearest weaver." Manchester competition had long ago killed the once celebrated Dacca muslins. It still continued to oust local weaving in many places and the weavers were fast taking to agriculture. Sir R. Baden Powell writing about the Punjab about the same period mentions that in every place he found shops of weavers employed at least in producing the coarser cloth required in quantities by all classes.

The general position in India seems to have been that coarse Khadi continued to be popular in the interior districts. Everywhere handspun was in vogue but its decline was already apparent and this state of affairs left its own reaction on the handloom industry. The extent to which the handloom weaver had been displaced since 1870 at least in one province is forcibly brought out by a comparison of the statistics for hand looms collected in Madras in 1870 by the Board of Revenue of that Province with those furnished in the latest census of 1921.

Year	Population of Madras Presidency	No of looms.	In village,	In Town	Twist used.
1870	30 millions.	2,79,220	2,20,015	59,205	1:3 imported yarn and the rest country made.
1921	41 millions.	1,69,403	No details		Almost all foreign or mill yarn.

Thus there has been a fall in the looms of over one lac in that presidency, relatively to the increase in population the fall in the number of looms being something like 60 in 100. It would be interesting to follow up the figures and find out what proportion the village looms bear to town looms today. Mr. Chatterton has tried to argue in the Madras

112 HAND SPINNING AND HAND WEAVING

Census Report of 1911 that the number of handloom weavers has remained practically stationary since 1870 (only the majority of them have had to work harder to make a bare living) but his conclusions are misleading being based on obscure and faulty classifications under the occupational head in the census reports of various years. He takes no account of the fall in looms which alone furnishes a true index to the state of the industry. It is evident that village weavers not infrequently have been compelled either to throw up their occupation or migrate to towns only to fall into the clutches of the money lender. Report has it that many have fled from their homes either to settle abroad or labour in the towns or in the plantations as coolies. The handloom weavers in Madras have been hit the hardest and if still considerable numbers of them cling to their looms to eke out their livelihood it is because the wearing of mill-made sarees and dhoties is not yet common among the men and women of the province. The import of foreign cloth actually displaced the industry of handloom weaving year by year while the import of foreign or mill made yarn far from benefitting the handloom weaver and keeping him above want only helped to hand him over to the tender mercies of local profiteers. The causes for the decline of hand-weaving are

not far to seek. The Government of Madras enumerated them in their administration report of 1879 while referring to the condition of weaving in Madura. Discussing as to why the income of the weaver fell they say : "As a curious illustration of how the imports of English made goods has affected the local weaving industry, it may be mentioned that the weavers themselves of the town of Madura do hardly use the clothes woven by them. Generally speaking the industry is becoming day by day less profitable to the actually working classes. The causes thereof are not far to seek. Prior to the importation of cotton twist some years ago it would appear that there were two to three thousand families employed in spinning thread. *This vocation has entirely ceased now.* Again prior to the importation of lace there were 500 Mussalman families engaged in making lace, and in their place there are, it would appear, only 10 families employed in making country lace. The preparation of colouring materials was at least done locally till a year or two ago but this too has been superseded by the Bombay article. As a necessary result of the cessation of all these vocations the labour is now directed entirely in one direction towards weaving and it is in consequence very cheap." The real wage of the weaver fell down very low and some of the weavers, "became agri-

culturists finding that the profession of weaving did not pay while others still are said to keep carts and bulls and employ themselves in collecting sand from the river for building purposes". Even to-day highly skilled weavers from the interior of the Salem District can be seen drawing carts in Trichinopoly.

The same set of circumstances which caused the stoppage of spinning led also in a large measure to the decrease in the number of handlooms. It was then that cotton came to be looked upon as a commercial product fit only for export or to be sold to the mills and soon lost its value as a factor of importance in domestic arrangements. The economy of home-spinning was forgotten and this led to curious results. Though the acreage under cotton trebled itself during the thirty years after 1866, the crop came to be localised in particular areas with the result that in some parts where cotton could be and was being grown, it ceased to appear as a crop while in others the very opposite was noticed, cotton displacing other crops. Bengal which grew cotton widely though not on a commercial scale was starved for want of it, except in one or two districts. The Gazetteer of the Central Provinces records that as early as 1866 "in the district of Wardha and in the Berars, generally, always cotton growing tracts, cultivation was at once enormously extended, taking up large

India Ex-
porter of
Raw Cotton

tracts of land hitherto devoted to the cultivation of edible grains. A similar though less extended movement took place in the Nagpur district where the cultivation probably doubled''. The wavy downs of the Deccan all grew cotton and in the process thousands of acres of valuable pasture land were absorbed by the new crop. Speculative high prices made the ryot look upon cotton as nothing else but a remunerative commercial product to be disposed of even before the harvest. The Government did much to encourage this practice among the ryots. In fact they sedulously fostered the cultivation of cotton on a large scale for export purposes to meet the needs of Lancashire during the years of the American War. The experiment failed in its object so far as Lancashire was concerned but led to a temporary forcing up of prices for the raw material in India. Cotton came mainly to be the product for export ever after. The decay of handspinning directly led to the destruction and weakening of many indigenous staples, for the ryot no longer looked to quality but only to the prolific and paying varieties, whatever the quality might have been. What England then took from India (after 1870) she did mainly for re-export. In Japan and China new markets soon developed for Indian cotton. The growing mill industry in the country began also to draw upon much

of the cultivated product. England had not ceased to look upon India as a vast field for experiment. At the present day though England has still largely to depend upon American and Egyptian cotton, she has not yet abandoned the idea of making India produce long-staples suited to her spindles. The Indian Cotton Committee of 1909 had as its sole object the solution of the question, as how best to make Great Britain independent of American sources of supply which may sooner or later become problematical. Though the evidence given before the committee itself was to the effect that the Indian ryot could not profitably take to the cultivation of long-stapled cotton, but would prefer to grow only the more prolific, paying short-stapled varieties, the committee decided that ways and means should be found out to make the growing of long-stapled cotton a possibility. The cultivation of exotic cottons is being tried in Sindh and the Punjab solely with a view to benefit Lancashire. Areas in Madras are also receiving care and attention and good indigenous staples are sought to be improved for the same purpose. The needs of Britain are to be met by India and are to be our concern, and only the other day the Industrial Commission of 1919 referring to this very particular matter of long-staple cotton cultivation said that "it was too urgent

from the point of view of the textile trade of the world, specially that of Great Britain, even to wait the result of experiment."

An exposition of the part played by the Government in making India 'the magnificent customer' for foreign cloth and exporter of raw cotton, would not be complete without an account of the effects the introduction of railways had over the cotton and cloth trade. When Lord Dalhousie wrote his famous minute on the Indian railways, he did not disguise the main intention which was merely to make the new means of communication and transport a medium through which Indian cotton could be carried to England and English cotton goods brought into India and distributed broadcast. John Chapman who was the first founder of the G. I. P. Railway wrote a whole book on Indian Railways in 1851 merely to discuss the subject, how best to lay out the lines with a view to carrying Indian cotton to England. The local consumption of cotton, which in 1851 'varied from 1,000,000,000 lbs to three times that quantity while the total export was but 150,000,000 or 1/8 to 1/20 of the whole yield' rapidly fell after the railways were introduced. The prices of cotton also rose as a direct result of the commerce developed through the Railways and furnished one more inducement for export. Chapman tells

Railways
Deliver a
Blow.

us that while cotton sold at $1\frac{1}{2}$ d. per lb. in 1843 its price rose to 2 d. per lb. in 1851 and 3 d. twelve years later. The Railways served also their other purpose, viz. that of facilitating the conquest of local markets in the heart of the country by foreign cloth. They carried the merchandise of England to the remotest corners of India and completed the ruin of home industries and crafts. It is often argued that the railways which ushered an economic revolution in the country did no harm to it but on the contrary benefited its commerce. But the fallacy in this is easily exposed. The extent of the injury done is thus ably estimated by Mr. H. K. Cornwell who wrote contrasting the economic revolution in India with that of England :—"The economic revolution which took place in England was the result of indigenous forces, and as in the case of all external changes which corresponded to internal activities after a period of disturbance during which capital and labour shifted to new spheres of action, a new equilibrium was established. Capitalists who were deprived of the old sorts of investments found new ones offered to them, workmen who found old industries failing moved to a much larger field for work. But in India the upper classes have lost all their old sources of income as administrators, soldiers, public servants of various sorts, while

the ryot has no compensating source of income in the new transport system, and old industries, apart from agriculture which employed millions all over the country, are being gradually destroyed by foreign competition, which has actually facilitated the levy of taxes to the amount of 30 million sterling squeezed out of the ryot's own pocket to pay for improved communications euphemistically called opening up the country to free trade. The improved means of transport only helped the further exploitation of a helpless people out of their own resources and did in no way contribute to the alleviation of their misery."

It should not be forgotten that if cotton crops have fetched fairly high prices for years, they have also helped in no small measure to the forcing up of a proportional rise in the prices of food-grains. A comparison of the acreage under foodgrains and cotton during the years from 1890 to 1924 will show how cotton areas have grown disproportionately in extent.

Year	Average under cultivation (in millions of acres.)	
	Cotton	Food-grains.
1892-93	8·945	186·761
1920-21	15·318	199·667
1924-25	26·48	210·000

Cotton
Export &
Food
Prices.

It may be that proportionately to the rise in the population, there has been a steady rise in the area under food grains. But India was underfed in 1892 and it is still underfed. More and more of cotton and such other commercial crop is being grown and there have been times when the people have had rudely to face the fact that cotton or jute or such other crop could not satisfy hunger. The ramifications of the Stock Exchange and the cotton market have found their way even into the remotest corners of India and the craze for the commercial export crop is on the increase every year.

The true basis in India's economic life shifted from the village to the town and domestic arrangements in rural areas stood entirely unhinged. For every commercial town that grew up in India, hundreds of village homes were either depopulated or seen to crumble down to the ground. The ruin of spinning came about after the advent of British supremacy. The art succumbed to the greed and unfair-play of the alien exploiter. The wheels lay idle or were burnt down as fuel. The unrestrained influx of foreign, especially British, cloth into the country and the early oppression of the artisan classes, gave it the death-blow and afforded no chance to it to adjust itself to the rapidly changing condi-

tions brought about by the introduction of cheap facilities for transport, marketing and the like. It could have had no other end; and as early as 1806 the historian Wilson tells us that there was at least one Englishman in the House of commons who is reported to have made the remarkable observation, found so true a prophecy today, that sufficient supply of raw material from India would "accelerate the period he saw approaching when the natives of India should be supplied with cloth made of their own cotton leaving to Great Britain, all the profits of freight, agency, commission, insurance and manufacture." Had it been the policy of the Government to protect indigenous manufacture home-spinning would easily have survived the competition of the most highly finished machinery which western ingenuity could invent. But that was not to be. British commerce had to be established with the misery of millions as its foundation. Englishmen like Burke had hoped at one time that the establishment of British rule would find for the poor toiling peasant the daily handful of rice in his pot; but the result so evident today only shows that the rice in the pot, which was there before British rule, has now disappeared like a mirage.

CHAPTER III

THE POSSIBILITIES OF HAND-SPINNING AND HAND-WEAVING AND A COMPARISON WITH THE MILL INDUSTRY OF INDIA

When we step into the threshold of the 20th century we find India flooded with foreign and Indian mill-made cloth, home-spinning having perished as an occupation of the people with only a few bleak survivals here and there as if to testify to the vast devastation that went before. The beautiful handspun fabrics so popular in an earlier day are driven out of our markets. No more does the activity and industry of our village artisans meet our eyes. No more is India the great manufacturing country of the world. Instead of supplying others, India is now herself supplied with a vast quantity of cotton cloth from abroad of every sort fine and coarse, white and coloured. The country became the hunting ground for alien exploiters. There were many eminent politicians who wrote and spoke about the ruin of the poor man's cottage but none of them had seemingly envisaged the question of reviving the old industry. The prevailing tendencies of

economic thought were such as precluded the consideration of reverting to what were called "the rude, primitive and obsolete implements" of days that were past. There was no use, it was thought, bolstering up an anachronism, no use wasting a tear over the charkha but we were to gird up our loins and try to build "Swadeshi" along lines suited to our modern conditions which would take into account the latest inventions in the spheres of machinery and utilise all the resources that the latest credit facilities would allow.

The Swadeshi agitation no doubt gave the opportunity to the nation to look into the inwardness of things. The people were made to realise that their growth could only be in strict

The
Charkha
Revival.

correspondence to their aptitudes and environments and were put on guard "against precipitation and hot-house culture". The nation was thrown back on itself and a powerful impetus to the spread of new ideas of self-reliance was the result. The revival of arts and crafts came up for serious consideration. Plans for giving assistance to the handloom industry were advocated with great force and ability, as for instance by lovers of art like Mr. Havell and Anand Coomaraswamy. But for this, so far as the textiles were concerned, all attention in the country turned to the question of serving

the mill-industry. Tariff measures, fiscal legislation and other expedients to protect and safeguard the industry were elaborated and discussed in all treatises on economics. The charkha was not yet in the nation's ken. The introduction of the charkha into Indian national life is the unique and distinctive contribution of Mahamta Gandhi. A mind accustomed to moods of search and self-introspection, constantly thinking in terms of the millions of the poor and longing to share their suffering naturally harked back to the charkha. Possibly the early study of Ruskin and Tolstoy may have thrown out to him the suggestion of an industry for the masses. Something approximating to charkha revivalism, some happy stroke of intuition which brought before his mind's eye at once the disease and the remedy must have led him to the universalisation of the charkha as the only panacea for the growing poverty of the millions. The very first mention of spinning in his writings occurs in the *'Indian Home Rule'* (1908) where he bids the lawyers, merchants and mill-owners to spin. The humanist in Gandhi spoke out in distinct tones. The world was not to be interpreted all in terms of the so-called laws of demand and supply. What was human must be economic and practical, and with this conviction was pressed the case for the charkha.

It is now seen that the charkha has come to occupy a supreme place in the national programme*. But does it promise to the nation a happy combination of welfare and price economics? Is Khaddar a useful practical economic proposition? Does it represent an urgent, live national necessity? On the answer to these and such other questions will depend the future of the spinning-wheel. The maintenance and development of all productive power in full working is no doubt the only safe principle on which economics can be built up into anything like a science of wealth and welfare. But the main purpose of all economic activity ought not to be so much the production of

* It was in the Special Congress of 1920 that "hand-spinning and hand-weaving and the wearing of Khadi were prescribed as measures of discipline and self-sacrifice for every man, woman and child". The Nagpur Congress of the same year reiterated the same resolution while at Bezwada in 1921 was taken the decisive step to get ready 20 lacs of working charkhas. The session of the All India Congress Committee at Delhi during the latter part of the same year made it obligatory on volunteers to know hand-spinning and areas intending to prepare for civil resistance were to show 60% of the population clad in Khaddar locally made. At Ahmedabad in June 1924 after the release of Mahatma Gandhi from prison was made the solemn resolve that every member of the elective organisations of the Congress was to spin half an hour a day and contribute to the All India Khadi Board 2000 yards of even and well-spun yarn. At the close of the year voluntary spinning found its logical conclusion and the Congress incorporated spinning into its franchise. Now the same franchise applies to the All India Spinners' Association while the Congress has made spinning optional in its conditions for membership.

wealth itself, as its production in such forms as would satisfy the needs of the people. These last would necessarily be dependent in a large measure on their ideals of well-being as embodied in their social organisation and tendencies and generally in their environmental necessities. In fact the values and standards fixed by economic theory should be such as not to disturb fundamentally the very nature of the complex social forces and the peculiar characteristics of national expression found in the life of the people. Normal economic action ought as far as possible to be in general harmony and conformity with the conditions in which men live or are forced to live for the time being. There is the constant interplay of human forces and impulses, both economic and moral, in deciding what a people need or want and nothing can be beneficial which does not take a full cognisance of all such forces. The standards that apply to one nation need not necessarily be capable of application to another. It may be that some nations like ours have yet to consider the very problem of how to live or how to make life possible before they can consider the further question of how to live well and comfortably. How to live is the one problem in the Indian homes and if the foundations of economic security can be laid inside the village home or cottage, the Indian problem

may well-nigh said to have been solved. Homes made economically secure and wherefrom the psychological aversion to work is driven out would ensure national prosperity and happiness. Self-reliance, productive work and the full utilisation of men's powers are to be the fundamental characteristics of our future progress. The real question is not the prosperity of a few individuals at the cost of their neighbours but the preservation of a whole nation on the principle of co-operation and mutual aid. And anything that would increase productive efficiency without exercising pressure or compulsion on the people in order to make them work on lines other than what their wishes and interests dictate and would at the same time augment the volume of the national dividend without in any manner injuring its just distribution benefits the cause.

Objection
to the
Charkha.

Viewed from this broad and general aspect the potentialities of Khadi and the Charkha make an irresistible appeal to the very best minds of the country. Still views and estimates about the utility of spinning vary considerably. To some the wheel is a mere chip of wood and no politics. There are others who doubt even its economic value. The Rt. Hon. Mr. Sastri once called spinning 'an unproved economic fallacy' voicing

more or less correctly the attitude of those who are sceptical. Is the charkha a mere fetish or are its economic and other possibilities so vast and beneficial to the national interest as to compel attention? The best method of commencing the study of this question seems to be to examine at the very outset the chief objections urged by economists and others against the charkha. Analysing all that has been said up to now against the revival of spinning, it will be found that the main lines of arguments are these ; first that spinning can never be a wage-earning whole-time occupation and that it can only be in an extremely limited sense a supplementary occupation; second, that even if it could be so, there are other more fruitful, more economical and convenient pursuits which the poor can apply themselves to, and third that assuming for the purposes of argument there is to be a saving to the nation through the charkha, it would then represent precious little. There is also the further consideration that even if useful the charkha cannot stand the stress of competition from the mills. It would be useful to sift and examine all these objections seriatim.

*Messrs. Kale and Prof. K. T. Shah have considered the case for the charkha in their studies in Indian economics. Besides these, several Government officers, notably the census officers for the various provinces in 1921 and Government textile experts in Madras, Bihar and elsewhere have also expressed their views on the subject in various documents of public interest.

It was and has never been suggested by the most zealous advocate of the spinning wheel that work on it could give a full day's working wage compared to that which may be secured in other trades and crafts. The wage earned by spinning will never probably exceed 2 to 3 annas a day. The charkha is certainly effective as a kind of famine insurance, considering that even the Government's standard famine wage is less than 2 annas per day, and its utility to that extent is unquestioned. But to the vast masses of agriculturists and others in our country can the charkha provide a useful supplementary occupation and add in a substantial measure to their incomes? It is here that differences of view and controversies arise.

Certain facts, however, stand beyond dispute. The almost incredible poverty of the masses is one such. Ever since Dadabhai attempted the ascertainment of the income per head of the Indian population there have been no less than a dozen estimates, all of which are reproduced below, made out by different economists at different periods.

The First
Considered.

The Poverty
of India.

130 HAND SPINNING AND HAND WEAVING

Name of Publication	Area dealt with	Year for which estimate was made	Total income in crores of Rs	Income per capita in Rs.
(1) Poverty & Un-British Rule in India	British India			
(Dadabhai Naoroji) ...	India	1867-68	340	20
(2) Financial Statement for 1882.	...	do.	1881	525
(3) 'Prosperous' British India (William Digby) ...	do.	1898	429	17.5
(4) Financial Statement for 1901-2 (Lord Curzon).	do.	1901	675	30
(5) The Wealth of India (Prof. P. A. Wadia and G. N. Joshi) ...	do.	1913-14	1210	44
(6) Wealth & Taxable Capacity of India (Prof. Shah & Khambatta) ..	do.	1900-14 1914-22 1900-22 1921-22	1106 1862 1380 2364	36 58.5 44.5 74
(7) Reconstructing India	...	1911		36
(Sir M. Visweswarayya) ...		1919		45
(8) The Average Income of India (Prafulla Chandra Ghose).	do.	1922		51.8
(9) Indian Economics (Prof V. G. Kale)	do.			40 to 48
(10) 'Industrial Decline of India' (Dr. Balakrishna)	...	do.	1911-12	539
(11) "The Science of Public Finance"				21
(Findlay Shirras*)	...	do.	1921 1922	2598 2668
				107 116

*The estimate of Mr. Findlay Shirras is grossly exaggerated. His methods of calculations are exceedingly arbitrary as when he takes the total crop valuation at nearly double the figure at which

There is no fair estimate of Indian incomes among these which fixes them far above Rs. 50 per head of the Indian population.* India is on all hands admitted to be the least prosperous country in the world. The condition of her poor is staggering. According to Prof Shah, more than a third of the total wealth of the country is enjoyed by about one per cent of the population or leaving for their dependents about five per cent at most; that slightly more than another third or about 35 per cent is absorbed by

other contemporary economists have assessed it. He has taken gross receipts and that for a single year, not the net income based on the averages of a number of years. Again for non-agricultural incomes he gives us no data but puts them arbitrarily at 883 crores or at 40 per cent of the agricultural incomes.

* One can understand the terrible poverty of India if for a moment one looks at some of the estimates for incomes of peoples in other countries.

Pre-war incomes of India and other countries compared.

Country	income per capita	
	in £	in Rs.
United Kingdom	50	750
U. S. A.	72	1080
Germany	30	450
France	38	570
Italy	23	345
Canada	40	600
Australia	54	810
Japan	6	90
India	2'4	36

another third of the population, and the rest 60 per cent of the people who are mostly rural inhabitants and agriculturists share among themselves only about 30 per cent of the income of the country. Or in other words the poorest of the poor hardly get twenty to twenty five rupees a year. This means insufficient food, utter lack of even the primary needs of life, an almost chronic starvation of the millions and a steadily deteriorating social and moral condition. Sir William Hunter estimated years ago that forty millions in this country go through life in insufficient food. The ranks of the under-fed are yearly growing. It is the low vitality of the rural population that accounts for the appalling death-rate in India which is 33.4 as compared with 21.9 in Japan and 14.6 in the United Kingdom. The influenza epidemic of 1918 to take only one instance levied its terrible toll of eight million lives taken from the land. The poverty of the poor is their destruction as one economist pithily described it. Their incomes grow leaner and leaner and they are left to face terrific famines without any recuperative power to fall back upon. India while she experienced only six and two famines respectively between 1800 to 1825 and 1825 to 1850, had to go through no less than 24 famines in the years from 1851 to 1900, six between 1851 to 1875 and eighteen bet-

ween 1875 to 1900. The recurrence of periodic famine which accounts for the terrific death-roll of the country is the certain indication of a still greater evil, the unchanging poverty of the people which seems to grow through all years, good and bad.

That the vast population of India is essentially rural and agricultural, that three out of every four persons in our country are engaged in agriculture and obtain their living directly from the soil with none of their old subsidiary occupations left to them, that even these are not fully engaged in the work of cultivation throughout the year and that consequently they have numbers of idle hours to fill, all this offers at once an explanation for the stupendous poverty of the people and their progressive pauperisation. The census report of 1921 * assesses the agri-

* The population of India in the towns and villages presents an interesting comparison.

(Figures from Census Report of 1921.)

- | | |
|---------------------------------------|------------------------------------|
| 1. Total population of India | 318,942,480 persons. |
| 2. Population in villages | 286,476,205 persons |
| 3. Population in towns | 32,475,276 persons. |
| | or 10.2 % of the total population. |
| 4. No. of towns | 2316 |
| 5. No. of villages | 685,665 |
| 6. No. of occupied houses in towns | 6,765,014 |
| 7. No. of occupied houses in villages | 58,433,375 |

The progress of urbanisation has been very slow in India. The urban population in 1891 was 9.5% while in 1921 it is 10.2%

cultural population of the country at 71% of its inhabitants. Even this 71% is not all doing agricultural labour; it includes those who do no cultivation and merely live on the income of the land. The rise in the number of agricultural labourers is a portent and as the census report of 1901 observed "it has led to a considerable landless class developing which involves an economic danger, because the increase has been most marked in the districts where the rural population is already congested or in provinces where there is a special liability to periodic famine." Even in normal seasons, the ordinary agricultural labourer earns a poor and precarious living. Agriculture is for the most part in the hands of small men. Farming on a large scale is quite exceptional in India. The growth of the population and continued partitions of landed property consequent on the relaxation of the old joint family system, have left minute divisions and dispersions of land in the country. The evil of fragmentation is almost universal. Lands are not only split up into small units but sometimes though belonging to the same owner or owners, they are so dispersed and scattered that cultivation becomes difficult and unprofitable. The total cultivated area in

In a period of 30 years the urban population has advanced by less than one per cent. The villages have not lost to the cities but the middle-sized country towns. The grain of India seems to be against over-urbanisation.

British India which is near 225 million acres hardly leaves an acre per head to the agricultural population. For instance in the thickly populated areas of Bihar the tenant holdings average less than half an acre. In the ryotwari tracts of the Madras Presidency holdings of one to five acres of land predominate. Dr. Mann says in his survey of the Deccan Villages* that sixty per cent. of the land holdings therein are of less than five acres. In Bengal, Mr. Thompson in the census report of 1921 admits that the cultivated area in the province leaves hardly 2.45 acres per worker. In Assam, the size of an average holding is 2.96 acres while in the U. P. it is only 2.5 acres. It is clear that such being the character of individual holdings all over the country at present, they cannot possibly engage the cultivator all through the year. This again is a fact admitted on all hands. If the testimony of Government reports were needed, many citations could be made. Here are a few of them. Mr. Edye writing of the United Provinces in the census report of 1921 says: "The bulk of the population is agricultural and agriculture here means ordinarily

* "In the pre-British days and in the early days of British rule the holdings were usually of a fair size, most frequently more than 9 or 10 acres while individual holdings of less than 2 acres hardly remained. Now the number of holdings is more than doubled and 81% of these holdings are under 10 acres while no less than 60% are less than 5 acres". *Land and Labour in a Deccan Village* by Dr. Mann.

the growing, harvesting and disposal of two crops in the year and not the mixed farming familiar in England. Agriculture of this kind involves very hard work for certain short periods, generally two sowings, two harvests, an occasional weeding in the rains, and three waterings in the cold weather and almost complete inactivity for the rest of the year. In precarious tracts inactivity may be unavoidable for a whole season, or even for a whole year. These periods of inactivity are, in the great majority of cases, spent in idleness." Mr. Houghton of the Central Provinces (C. P. Census 1921) says almost the same thing. "Agriculture on which the majority of the population depends for its living, does not employ labour fully all the year round. There are large portions of the province in which the kharif crop which is raised at the end of the rains is the only crop of importance that is grown and when this crop is gathered there is a scarcity of employment until shortly before the break of the next monsoon." Referring to Bengal Mr. Thompson (Census Report of 1921 for Bengal) has it that "the cultivation of less than $2\frac{1}{4}$ acres cannot employ a man for more than a comparatively small number of days in the year. The cultivator works fairly hard when he ploughs his land and puts down his crops and again when he harvests them

but for most of the year he has little or nothing to do." The same painful conclusion is reiterated by Mr. Calvert (in his book on the '*Wealth and Welfare of the Punjab*') who estimates "that the work done by the average cultivator in the Punjab does not represent more than about 150 days' full labour for 12 months." This point needs no more elaboration. The cultivator specially in the dry unirrigated tracts is unemployed for more than six months in the year. As for the women in his home they assist him only during the harvesting and weeding operations. But for this, they are forced to remain idle for the most part of the year. Their periods of forced idleness are far longer than those of the men. Further the fruit of the cultivator's labour depends on the monsoon. For the most part cultivation to him is gamble in rain. This fact coupled with the periods of no work with which the cultivator and his family are face to face explains at once the widespread unemployment in the country and the chill penury of the masses. At the root of the enforced idleness which is the cultivator's lot for a greater part in the year and the risks to which cultivation itself is exposed in times of scarcity and drought lies the unfortunate circumstance that besides agriculture there is now no other stable supplementary occupation left for the people. This fact cannot be

overlooked and any remedy proposed which does not include a provision for one or more supplementary occupations to fill idle hours and wasted time will fail of any effect.

From a study of Indian agricultural conditions the lesson forced on us is that we have to deal with the cultivator's needs immediately and in such a way that not only will his productive powers be utilised fully during the seasons of idleness but also that the output of his labour will be able to meet his primary wants of food and clothing. The remedy adopted should be such as will not stand in the way of his taking to more profitable forms of employment if any and can always be resorted to in case of seasonal unemployment due either to regular want of work or the prevalence of abnormal conditions like flood and famine, and will be available in his own home to every member of his family. The subsidiary employment should flow from some cottage industry which will add to the ryot's income pretty substantially and in which not only he himself will work off and on but the members of his family, women and children as well, will be able to help without any difficulty, and to which none need feel any aversion because of caste, tradition or taste. Handspinning answers every one of these tests. It is admirably adapted to the

Spinning
Answers the
Tests.

old social organisation of the village which still persists to this day. It is a rural seasonal industry and the only one of its kind that is applicable to all the country and will suit a large population which is not only poor and half-starved but also uneducated having practically no opportunities for acquiring special skill or knowledge. Only the other day Mr. Higginbotham of the Allahabad Agricultural Institute deposing before the Taxation Enquiry Committee "deplored the absence of a proper system of village industry to take care of a surplus people." He argued that as the land was asked to provide a whole time living for a very large number of men who could work on it for only half the time, the remedy was to develop and devise "rural, seasonal industries for them". The cultivators clearly need an effective supplemental occupation and that of a kind which will not involve any sacrifice of those rights and comforts which agriculture already brings in.

In other words it would not be possible for the agriculturist except in the last extremity to go in search of work in industrial centres which either exist or promise to come into being and the only amelioration in the words of Mr. Thompson, the Bengal Census Officer, that seems possible "is by bringing work with-

Mr. Thompson's
Jutemill.

in reach of the cultivator near his own village." Mr. Thompspon concedes that this is no doubt "the reasoning of the more thoughtful of those who preach the use of the charkha and it is sound so far as it goes." Here he pauses as if to recover from the treasonable heresy of elaborating an argument in favour of the spinning wheel and breaks off again into a fit of specious and fallacious reasoning in an effort to explore the so-called futility of reliance on the charkha. "The Bengalee cultivator," he says, "is used to obtaining a sufficient return for very little labour from his land to support him at the present standard of living. He certainly will not take kindly to any subsidiary occupation which gives but a very poor return for a great expenditure of labour and time. The economics of the charkha are beyond hope though those of the handlooms are not by any means in the same position." But then having to face the awkward fact that the scope for the extension of handlooms is not very considerable because of inherent difficulties in the industry and the requirement of special skill, he concludes with a ridiculous suggestion that some philanthropist may open a jute mill in a rural centre to provide work for the villagers. As if one jute mill or a hundred for that matter can solve the problem even in Bengal! Granted the essential

conservative habits of the peasantry and its reluctance to take to employment far away from the village homesteads—Mr. Thompson admits both—it is impossible to think of any widespread rural seasonal occupation for the ryot except handspinning. Mr. Thompson's jute mill which he admits will bring no profit and is a risky venture, is the *reductio ad absurdum* of his own logic and constitutes the most eloquent testimony to the charkha. The return from the charkha to the agricultural labourer may not be large; but considering that the net gains accruing to him from agriculture do not probably amount to more than Rs. 15 per acre of cultivated land, the value of the increment that his income may receive from the earnings made by the yarn spun at home would be very large indeed. In the economics of the charkha lies his only hope.

This statement may well be tested in the light of facts gleaned from work-
 Facts Learnt in Centres. spinning centres. They furnish a sure and certain foundation for further argument. In Behar, in Madras, in the Punjab and in other Provinces where spinning is being rapidly taken to as a useful subsidiary occupation by the village women it has been found that the average earnings of the spinner per week range from eight to ten annas. If it is assumed that spinning

142 HAND SPINNING AND HAND WEAVING

is done only during off-seasons the annual earnings of the spinning home may not exceed Rs. 20 to 25 a year per spindle. But this would represent a fairly substantial addition to its slender income. A detailed investigation of present conditions in some typical villages in the khadi areas of Tamil Nadu showed the following interesting results.

Name of Village.	No of Wheels.	Annual earnings from spinning.	Annual agricultural and other incomes of spinning families.	Per cent- age of 3 to 4.
		Rs.	Rs.	
PUDUPALAYAM AREA				
1. Uppupalaiyam	25	460	3360	12
2. Sembampalayam	29	450	3065	15
3. Puliaympatti	20	346	2650	14
4. Chithalandur	25	375	2150	17½
5. Pudupalayam	25	336	2398	17½
KANOOR AREA				
6. Komarapalayam	60	1398	9009	15
7. Chellampalayam	14	242	2190	12
UTTUKKULI AREA				
8. Velampalayam	25	401	1400	28⅓
9. Papampalayam	68	1205	5220	23
10. Sembampalayam	14	372	2672	16

In case of whole villages spinning represented an addition of 12 to 20 per cent over other earnings. The women spun only during spare hours that remained to them after attending to domestic and field work. Not one of them regarded spinning as drudgery. In cases of individual families

the results were even still more striking, some working two or more wheels receiving as large an addition as 50 % to their agricultural incomes. It was also remarkable that old women and children whose labour it would not have been possible to utilise at all could become useful spinners and take their due share in the nation's work. In times of famine, drought and distress, spinning, the value of which even in normal seasons is considerable, acquired enhanced importance. If similar investigations as the above were undertaken in the dry unirrigated tracts in other parts of the country, they would probably repeat the same results and experiences. The fact then is that spinning effectually supplements agricultural earnings. There is hardly anything else that can bring about the same results, and that will suit all parts of the country. The agriculturist sorely needs help and in the absence of relief in some substantial measure through some subsidiary occupation there is no redemption for him from growing indebtedness and poverty.

It is not true to say that if the charkha and the other old crafts and primitive methods of trade and workmanship have been displaced by improved appliances and cheap transport facilities, they have also opened up innumerable avenues of employment for

Spinning a
Felt Want.

the people. On the other hand, what seems to be only too true is that the problem of unemployment seems to be yearly growing acute, almost defying solution. The old indigenous industries of the country have perished and suffice it to say that what has come up in the wake of modern enterprise in the shape of industries organised and unorganised has not been able even to absorb a tenth part of the population. Amelioration for the scantily provided agriculturist seems as far distant as ever. It is all a story of utter helplessness. A glance at the occupational statistics in the census would set all doubts at rest.*

Employment or occupation.	Percentage of population dependent upon it.
---------------------------	---

1 Agriculture	70.9 % with 45 % workers and 55 % dependents.
2 Industries organised	1 %
3 Trade	6 %
4 Transport	2 %
5 Administration	2 %

A more detailed table showing the distribution of the peoples of India in 1921 according to their occupation is as follows :

A. <i>Production of Raw material</i>	...	231,194,403
1 Exploitation of men and vegetation	...	230,652,350
1 Pasture and Agriculture	...	229,045,019
2 Fishing and Hunting	...	1,607,331
II. Exploitation of minerals	...	542,053
3 Mines	...	398,968
4 Quarries and hard rocks.	...	74,945
5 Salt etc.	..	68,140
B. <i>Preparation and supply of material substances</i>	...	55,612,694
III. Industry	...	33,167,108

THE POSSIBILITIES OF HAND-SPINNING 145

The rest have no fixed living to depend upon and mostly do what the census report calls "domestic and unproductive work" an epheumism for idleness. Comparing the

6	Textiles	...	7,847,829
7	Hides, skins and hard materials from animal kingdom	..	731,124
8	Wood	...	3,613,583
9	Metals	...	1,802,208
10	Creamics	...	2,215,041
11	Chemical produce properly so called and analogous	...	1,194,263
12	Food industries	...	3,100,361
13	Industries of dress and toilet	...	7,425,213
14	Furniture industries	...	27,065
15	Building industries	...	1,753,720
16	Construction of means of transport	...	52,793
17	Production and transmission of physical forces	...	24,881
18	Other miscellaneous and undefined industries.	...	3,378,937
IV	<i>Transport</i>		
19	Transport by air	...	629
20	Transport by water	...	745,399
21	Transport by road	...	2,145,949
22	Transport by rail	...	1,232,672
23	Post Office, Telegraph and Telephones	...	207,405
V.	<i>Trade</i>		
24	Banks, establishments of credit, exchange, and insurance	...	993,492
25	Brokerage, commision and export	...	242,628
26	Trade in textiles	...	1,286,277
27	Trade in skins, leathers and furs	...	283,862
28	Trade in wood	...	227,667
29	Trade in metals	...	641,688
30	Trade in pottery, bricks and tiles	...	62,498
31	Trade in chemical products	...	120,028
32	Hotels, cafes, and restaurants	...	706,332
33	Other trade in foodstuffs	...	9,282,651

146 HAND SPINNING AND HAND WEAVING

census figures for 1921 with those of 1911, the agriculturists, it will be found, have increased a little faster, than the total population. Industries have substantially decreased

34	Trade in clothing and toilet articles ...	284,868
35	Trade in furniture ...	173,188
36	Trade in building material ...	76,810
37	Trade in means of transport ...	331,900
38	Trade in fuel ...	519,296
39	Trade in articles of luxury and those pertaining to art, science and letters...	459,868
40	Trade of other sorts ...	3,048,570
C.	<i>Public administration and liberal arts</i> ...	9,846,050
VI	<i>Public force</i>	
41	Army ...	2,181,597
42	Navy ...	571
43	Air force ...	1,033
44	Police ...	1,422,610
VII		
45	Public administration ...	2,643,882
VIII	Professions and liberal arts ...	5,020,571
46	Religion ...	2,452,614
47	Law ...	336,510
48	Medicine ...	659,583
49	Instruction ...	805,228
50	Letters, arts and science ...	761,636
D.	<i>Miscellaneous</i>	
IX		
51	Persons living principally on their income ...	479,835
X		
52	Domestic service ...	4,570,151
XI		
53	Insufficiently described occupation	11,098,566
XII	<i>Unproductive</i>	
54	Inmates of jails, Asylums and Almshouses	145,467
55	Beggars, vagrants and prostitutes	3,020,680
56	Other classified non-productive pursuits	87,385

and of the principal forms of industry, the textile workers have dropped considerably, as also potters, and workers in wood and metal. The village communities are coming fast to contain a numerous population whose employment mainly depends on the cultivator and which is therefore ordinarily supported from the produce of the village fields. Nearly nine-tenths of the population of the country live directly or indirectly by agriculture and they have too many idle hours to fill. Extension of organised industries which in the past have found employment only for one per cent of the people, even if continued for ten or twenty more years cannot absorb any appreciable proportion of those wanting employment. The provision of facilities for the growth of crafts and arts other than hand-spinning cannot in the near future possibly provide a subsidiary occupation even for a hundredth part of those that sorely need it. The gaping void left by the stoppage of handspinning has not yet been filled and can never be filled except by a revival of that very occupation and its other ancillary trades and crafts. The experience of the last few years has demonstrated clearly that spinning was a felt want. The village folk who took to it have not deserted it for other and more attractive occupations and pursuits

for the simple reason there were none such. In fact, whenever spinning had to be stopped, for want of proper organisation or bad business, the spinners felt the blow and looked forward to better times to ply their wheel once again.

There are some critics who represent that spinning is obstructive of progress in all directions, even in agriculture. The Government simulating an affection for the lot of the poor agriculturist often assumes this pose and bids the intelligent public worker turn his attention more to agricultural improvement than to spinning. The fallacy underlying the assumption that spinning is antagonistic to other progress is easily exposed. In fact it can be without difficulty established that spinning, stabilising as it does the home and utilising all its latent productive power to the full, actually helps all other progressive activity. Let us examine the position in respect of agriculture itself a little more closely than has been done hitherto.

STATISTICAL ABSTRACT OF AGRICULTURAL POSITION IN 1921-22.

	Acres.
1. Area by Professional survey in 1921-22	666,619,000
2. Area according to village papers do	663,508,000
3. Area under forest do	85,419,090
4. Area under cultivable waste other than fallow "	151,173,000
5. Area not available for cultivation	153,178,000
6. Area of fallow land	50,554,000
7. Area sown	223,184,000
8. Area irrigated.	47,790,000

It is clear that about a third part of the area in the country is being cultivated. The area under cultivable waste is only about two-thirds of that under cultivation. This must obviously be inferior land, and even if brought under cultivation will add at the most half an acre per individual among the agriculturists. But to bring this under cultivation is no easy task for it would require large capital for clearing purposes, implements and for cattle, which the Indian peasant can neither afford nor secure without Government aid. Further, clearing and the like would be the work of two or three generations even if undertaken from now. During the last 15 years (1907-21) the area sown increased only from 210.88 to 223 million acres or by 18.4 million acres giving roughly a million acres as increase every year. Progress in the future cannot be more rapid than hitherto. It has been noticed that on account of fragmentation of the holdings the scope for extensive farming is getting limited in the country. The pressure on cultivation is fairly intense. The soil being required to do everything gets little rest and gradually deteriorates and yields diminishing returns. All land fit for profitable cultivation has long been under tillage and the facilities for intensive cultivation are largely absent chiefly owing to want of capital in the hands of

the ryots. The want of proper manuring in most cases due to the poverty of the cultivator keeps the yield very low. The losses of nitrogen in our agriculture are many and obvious. In the absence of a sufficient supply of fire-wood over a large part of the country most of the cow-dung is burnt as fuel and in the process much nitrogenous assistance to the soil is lost. Year by year tons of combined nitrogen chiefly in the form of oil seeds, various food and other grains, animal products like bones and hides are exported to other lands and practically nothing of this huge loss is made up by the import of nitrogenous fertilisers. The development of agriculture for the future no doubt demands three conditions, a regular and increasing water-supply, nitrogenous fertilisers and the adoption of methods of better cultivation, but none of these conditions is an immediate possibility. Irrigation has no bright future before it and even if all the schemes on hand are worked to success they cannot increase the area by any more than 9 million acres. Agricultural improvements effected during the last few years brought little increase in the yield. According to one authority (Mackenna, Agriculture of India) an income of $3\frac{1}{2}$ crores was added as a result of the work of ten years. This is negligible considering that the normal annual value of agriculture produce

is 1000 crores of rupees. Correspondingly to this we notice on the other side the debt position of the cultivator worsening. The total agricultural indebtedness of India was estimated in 1911 to be 300 crores by Sir Edward Maclagan. This is a gross under-estimate but it is not necessary for us to consider its correctness. The position today is one distinctively for the worse. The total volume of debt is increasing and the interest charges on it are well-nigh crushing. The foregoing is a brief survey of the agricultural position in the country and the direct result of it all is the steady starvation of millions of the people. Agricultural improvement, which by the force of peculiar circumstances prevalent in the country will necessarily be slow, cannot proceed at any appreciable pace under an alien administration that looks upon land mainly as a fruitful source of revenue for the State and exploitation for commercial purposes. It will no doubt have to be assisted at every turn by expert knowledge and advice. Even then the problem of filling non-work seasons will remain and will demand fitting solution. Some occupation will have to be found for the cultivator and his family at his own home or cottage, which, while leaving some little margin of saving against periods of stress and drought, will also provide for him one of the prime necessities of life. It is here

that spinning becomes a fitting extension of agriculture, an effective auxiliary to the poverty-stricken home. Every charkha added to the home acts like an addition to its land-holdings. Rain or no rain, the wheel will earn for the members of the family.

The reversion to spinning is nothing less and nothing more than the recognition of a vital practical necessity. But here it is interposed again, is spinning remunerative enough? Can it add appreciably to the national income? Mr. Kale has endeavoured seriously to prove that the charkha, even if successful would bring in negligible savings amounting only to Re. 1 and as. 6 per head if distributed over the entire population. This is grossly misleading and makes no point against the charkha. Apart from the economic imperfections in Mr. Kale's statement which arise out of the failure to take note of other savings and advantages accruing to the nation besides the import bill in respect of foreign cloth—such as the freight bill for the distribution of that cloth right through the land, a steady and secure home market for the agriculturist growing raw cotton undisturbed by abnormal conditions, and the release of large sums of capital which are now invested and locked up in the foreign trade and of which a great part will under khadi condi-

Is Spinning
Remunera-
tive?

tions be available for other productive investment—there is the prejudice caused by the mischief of inversion. Mr. Kale forgets conveniently for the moment that there is no other alternative industry which if successful would offer the same results as hand-spinning: Cotton piecegoods are the largest item in our import bill representing nearly a third part of it. If there was any industry other than handspinning which would fill the idle hours of the rural inhabitants and at the same time bring in a larger national dividend, Mr. Kale's figures would have some point. Hand-spinning is eminently suited to the peculiar conditions of Indian village life and social organisation; it is easily learnt and practised and needs little capital outlay; and what is most important offers the only "rural, seasonal occupation" giving the family of the agriculturist a decent additional income which, though not large, is yet substantial and provides in a measure the recuperative power needed so badly in years of drought and famine. Spinning looked at cumulatively for the nation means the production of new wealth on the largest scale possible and the stoppage of a ruinous, continuing drain on the country's resources, while from the point of view of the individual too, the result is likely to be greatly

beneficial, a far more just and equitable distribution of wealth than at present obtains, augmenting the poor man's resources and improving his social position.

To put it briefly, the advantages of reviving hand-spinning and the weaving of hand-spun cloth among the people would be as follows:—

Advantages of the Charkha Summarised.	(1) Spinning provides the best supplementary occupation to the agriculturists most of whom with their family, find no work for 3 to 6 months in the year and are forced to remain idle. During periods of acute famine, spinning can be pursued with profit even as a whole-time occupation. <i>Spinning is waste turned into work and wealth.</i>
--	--

(2) It stops the drain of wealth to foreign countries at least to the extent of 60 crores of rupees. It also stops the atrophying of the manufacturing power and skill of the people.

(3) Its product, cloth, supplies one of the prime necessities of life.

(4) It is easily learnt and practised and is suited to all men, women and children.

(5) It is the only industry suitable to all and yet serves to raise national prosperity at a bound.

(6) It does not propose to replace or substitute any other regular or more profitable

occupation but only to replace idleness in off-seasons and unemployment.

(7) It destroys the old psychology of helplessness, restores initiative to the nation and imparts to it an atmosphere in which sustained and continuous effort among all people becomes possible.

The economic problem of India is the rural problem and anything that serves to utilise effectively the latent manufacturing capacity of the vast rural population is from the point of view of Indian economics a valuable weapon and asset. Prof. K. T. Shah of Bombay has touched upon the subject of the charkha in two passages in two different books. One of them in the earlier book exhibits one running confusion between the hand-loom and the charkha and hardly does justice to his abilities. In the other, in his latest work on the wealth and taxable capacity of India, he returns to the attack on the charkha and though admitting its value in a very limited sense as a subsidiary occupation, yet thinks "it is an expression of national helplessness, if not despair that they (politicians) should insist on an antiquated and unprofitable method of *taking off the surplus population from agriculture*, so as at least to give this precious industry a sporting chance to make good." It may be straight-away answered that the charkha proposes to

Prof. Shah
on the
Charkha

do nothing of the kind as *taking off* surplus population from the land. The population will be on the land but will find additional subsistence from the charkha when it has nothing to do or to put upon the land. As an alternative to the charkha, the writer suggests remedies to take off the surplus pressure on the soil in the shape of development schemes, including those of the tea gardens and other exotic cultivation in Assam, forestry and mining in Behar and Burma and similar industrial ventures in other provinces. What is sketched out by Mr. Shah, even if acceptable, is a programme not for years but for generations and one does not understand how it can in any sense be a substitute for the charkha. It may incidentally be observed that for Madras Mr. Shah can find no industrial outlet and would therefore let part of her population seek employment in Burma and be absorbed therein. The suggestion only reduces his position to an absurdity and almost reminds one of the transfer of populations which one mad Emperor once proposed as between Delhi and Doulatabad.

When all is said and done there is still to be discussed the question
 Possibilities of Spinning. whether India can ever become self-sufficient in the matter of clothing through the medium of the spinning wheel or in other words

whether hand-spinning has any chance against competition from modern industrial machinery and up-to-date mechanical appliances. It may be stated at the very start that in one sense there can be no competition at all as between hand-spun and machine-made cloth. Home-spinning, being no more commercial than domestic cookery, for instance, will be beyond the pale of all commercial competition. It will be a process undisturbed by extraneous forces. As food cannot be displaced by money, no more can home-spinning be ousted by machinery. In quite another sense there may be real competition as between machine-made and handspun cloth. But even here it must be remembered that the chief aim in reviving spinning is to utilise the dormant manufacturing power of the nation, mostly in the rural areas. Spinning given up was like a limb lost to the people and the present endeavour is to set it up again. The answer to the question if spinning can succeed even in the face of machine power* will depend largely on the examination of

* In this connection the reader may note the valuable statement of Sir Daniel Hamilton made in the *Young India* of the 8th March 1922.

" I may say from my personal experience of Indian rural life that given a fair chance with the help of modern finance, not only the spinning wheel but the handloom can compete successfully with steampower the reason being that four months labour which is now largely wasted in the agricultural off-seasons costs nothing. No grain or cloth can be cheaper than that which costs only the price of the raw material."

the possibilities of reviving hand-spinning on any large scale, in fact of universalising it among the people. The facilities that exist for hand-spinning throughout the country are numerous. The more general among them are illustrative of the potentialities for the future.

(1) The raw material, cotton, is either grown on the field of the owner of the charkha or is available very near his own door.

(2) The charkha is such a simple instrument that it can be made or mended in his own village.

(3) It can be moved easily and worked at any place or time by all members of the family even including children and old women.

(4) Working at it imposes no strain or drudgery and can be suspended any time the person chooses.

(5) Even ordinary varieties of Indian cotton can be spun by expert hands into very fine yarn.

(6) The consumer for the product may be either the person working the wheel or his neighbours.

(7) Traditionally skilled weavers are available in all the remotest corners of India.

There is everything to be said in favour of this cottage industry. It enjoys all advantages from the national point of view and there remains for detailed investigation only the feasibility of its adoption in all Indian homes.

The subject then for preliminary inquiry
 would be whether there are enough
 Estimates of Charkha and Loom Strength. charkhas and looms in the country
 to make a venture such as this
 immediately practicable to any
 extent. The difficulty here is one chiefly of
 data. We are largely in the region of
 conjectural estimates. The number of work-
 ing charkhas at the present day do not by
 any means give us an adequate idea of the
 resources that lie open for utilisation. The
 Punjab, Tamil Nadu, Andhra, Behar,
 Karnatak and Rajputana are so many gold
 mines for the charkha. The possibilities
 in these provinces though not yet estimated
 with any measure of accuracy, are known to
 be immense. A conjectural, though a low
 estimate, according to many of the experi-
 enced khadi workers, of 50 lacs of charkhas
 for the entire country may be taken as the
 starting premise of our inquiry. These, if work-
 ed even for 4 to 5 hours a day on the average
 would yield about two hanks of 840 yards
 each of say 15 counts even allowing for all
 shortages in speed. Or the outturn per
 spindle may be put at about 48 lbs a year
 which would leave yarn enough for 192 sq.
 yards of khadi if we take it that from a pound
 of yarn 4 sq yds of cloth can be made. The
 total production for these charkhas calcula-
 ted at this rate would be over 96 crores of

yards or nearly two-thirds of the import of foreign cloth which stood at 157 crores of yards in the year 1922-23. Thus if we assume that the number of charkhas now available in the country are worked only for 4 hours a day, they will easily have produced a great part of the clothing that is now being imported from abroad. Here lie immense possibilities for work in the future. As regards handlooms we have more precise information. The persistence which the hand-loom weaver has exhibited in the face of competition from machine-made fabrics is an undisputed fact. The vitality of this industry has been such that it does support even to this day no less than 60 lacs of people. The number of handlooms available in eleven at least of the provinces in our country are given with some measure of accuracy in the census report of 1921.

Provinces		No. of looms
1. Ajmer	....	1587
2. Assam	....	4,21,367
3. Bengal	....	2,13,886
4. Bihar and Orissa	....	1,64,592
5. Burma	....	4,79,137
6. Delhi	....	1,667
7. Madras	....	1,69,403
8. Punjab	....	2,70,507
9. Baroda	....	10,857
10. Hyderabad	....	1,15,434
11. Rajaputana	....	89,741
Total		19,38,178

The above figures do not include those for Berar, the Central and the United Provinces. Even leaving them out of account, the country has no less than 2 million handlooms whose outturn even if it be only 1000 sq. yards per year per loom (it may well be 1500 sq. yds. in most cases) would be more than sufficient to cover the imported cloth. The country has enough handlooms and spinning wheels to justify an attempt at the universalisation of khadi. The country also possesses what is more important still, the skill necessary for the manufacture of the cloth needed. The spinners and the weavers wait there only to be organised and with fast reviving dexterity in both it would not be impossible to make khadi an effective substitute for machine made fabrics.

The utilisation of the vast resources in the country depend not so much on the flow of capital into the enterprise though that too is at present sadly needed, as on the soundness of the organisation set up for the spread of the charkha. If we desire to bridge the hiatus of nearly three or four generations in the life of this our village industry, we have necessarily to make our notions of revival conform to conditions which obtained years ago and appeared to suit admirably the habits and customs of rural life. The beauty and almost

Ideal
Condition of
the Industry

incredible simplicity in the hand-spinning and hand-weaving of an earlier day consisted mainly in the fact that there was brought about an almost perfect adjustment in the demand and supply without the necessity for a huge centralised capital and an equally large centralised organisation. The women of the richer classes spun both for amusement and household use while those of the poorer classes spun both for home consumption and for sale. Enough cotton was reserved in the houses so that there was no need for a capitalist organisation to store and distribute the raw material. Spinners and weavers lived together as neighbours and the latter in most cases directly got the yarn they needed for their use without any middlemen to finance them. There was an automatic adjustment of supply to demand. The demand was always known and the craftsmen could adjust his labour to prevailing needs. It was a perfectly decentralised condition and one which permitted freedom and spontaneity to all workmen.

Decentralisation* then should obviously be the aim of all our endeavours. The absence of centralisation in every particular implies that full advan-

Decentralise
Spinning.

* This has reference only to the state of the industry in the past and to the future spread of spinning. It does not however imply that there should be no centralisation in the controlling and directing organisations set up for the purpose of universalising spinning.

tage should be taken of every area where traditional spinning survives in some degree or other. Spinning survives in various states at the present time in the different provinces and the simplicity and ease found in its operation in each province would probably afford an index to the condition or extent to which decentralisation may be pushed within its particular limits. In Nawagong for instance in the province of Assam it is even now customary to exchange cloth for cotton. The system pursued is known by the name Adhi (or half) i. e. given a quantity of cotton in the village home, it is ginned, carded, spun and woven therein and finally returned in the shape of cloth half of which goes to cover the wage for all the operations involved. What obtains in the Andhra province and even in parts of Tamil Nadu where it is still customary to sell warps of standard sizes in open market is certainly less perfect than the condition in Assam. Herein all the processes except that of weaving are covered up in the spinning hamlet. The peculiar conditions in Assam, which have made of every home a weaving factory, are an extreme case and it is not to be expected that they will ever be repeated in other parts of India. One grade less decentralised still, we see spinners delivering yarn either in hanks or as mere balls leaving everything connected with the warping, and reeling of

it to the weaver. This is noticed in most parts in South India, Behar and the Punjab. It may be that the weavers purchase yarn directly and market the cloth on their own account without having to pass through middlemen. Survivals are still of a different kind, the spinner does the carding too, but being too poor cannot stock sufficient cotton to be able to market yarn on his own account. The least decentralised condition is obviously that where even this double process is not covered by the spinning home which being supplied with slivers from the local pinjari converts them into yarn. In all these various forms spinning still survives and persists in the country though not to such a degree as to make of it a stable occupation. The starting point of our work is defined by these limits and progressive decentralisation adopted consistently with the peculiar conditions and customs in each province or area cannot fail to bring increasing advantages to the Khadi movement of today.

Cotton Stocking by the Spinner an Insurance Against Unemploy- ment.	The very first step that needs to be taken in the process of decentralising the spinning industry, in fact the very basis on which the whole edifice can be made to rest securely, is the elimination of the necessity for cotton stocking for the use of the
---	---

spinner. The bulk of our spinners in India are either growers of cotton or farm labourers on cotton fields. Some of them even get their wages paid in cotton. Others who own land reap the cotton crop. In areas where no cotton is grown the number of spinners is not considerable. There are admittedly places where the spinners happen to be too poor to stock cotton for themselves and they will need help for some time more before they too can be made to stand on their own legs. The advantages that would flow out of an arrangement where the spinner stocks his own cotton are many and need examination. In the first place the waste involved in expending huge sums on cotton stocking and storing would stop. If we were to aim at the production of 50 to 60 crores worth of cloth for the country, we would certainly require an initial outlay amounting to many crores for the purpose of cotton stocking and storing merely. Not only would this outlay be saved but the additional charges incurred on establishment, insurance and the like, which today tend to lower the real wages of the spinner, will also disappear. It may not be possible all at once to come to this step but every effort to minimise the need for keeping huge stocks of cotton should be made from now. Further, fluctuation in cotton prices

is so constant a determining factor in cotton stocking. In the period of rising prices, large-scale producers will naturally be found reducing their operations to the minimum consistently of course with their profits. The spinners then get no immunity from the reactions of speculative prices. As it happened in the year 1923 when several Khadi producers had to curtail their output owing to the sudden rise in cotton prices, the spinner may find himself deprived of employment. The stocking of cotton by the spinner himself is the surest insurance against such periods of forced unemployment. He who has stocked his cotton in time will be able to add the ginning to his spinning wage and besides keep what remains of cotton seed to himself. The retention of good cotton seed means no little gain to the farming home. The spinner would be able to share the profits of rising prices for cotton in the prices of yarn that he will get or bargain for, while during periods of falling prices, he can always conserve the use of part of his labour for his personal needs. Looked at from any point of view the spinner would be the gainer. It is thus in the spinner's own interest that a vigorous educative propaganda should be undertaken to push home the idea of his becoming a free agent in respect of the raw material. Some amount of facility to

poor spinners needs no doubt to be given in the shape of cotton stocked for them during the years of transition but the practice continued indefinitely will only reduce the spinner to the position of a dependent.* Where the spinner is extremely poor and destitute, help has to flow for him from outside. But he too, like his brother, should be taught to view *cotton as a kind of food crop. Cloth is as much food as food itself.* And when once the spinning family is acquainted with the fact that the "cotton crop" too needs the same discriminating treatment from it even as the "food crop" it will not be slow to gravitate towards the old arrangement of yarn fairs and free markets.

Quality and Price of Output and Cotton Stocking.	When the spinner learns to stock his cotton, the quality of handspun yarn will be seen to improve by a bound. Having a property in the cotton, the spinner has necessarily to practise the greatest circum-
--	---

* The local Pinjari may sometimes play the role of a stocking-agent for cotton. In the villages for instance of the Kurnool district in the Nagalapuram centre, he has already found his true place combining in himself the dual function of a craftsman as also of a small middleman, enjoying the profits of both. He stocks a few maunds of cotton, cards them into slivers and after distributing them among local spinners also collects the yarn. He has, so to say, becomes the provider as well as the business agent, not the mere idle profiteer who tries to live on unproductive labour.

spection and economy and make the best use of the raw material. He also becomes a free agent in production and secures the power to bargain for the best prices for his output. The quality of yarn records at once a remarkable improvement. The cotton is ginned and cleaned with care. The incentive to use as little of the raw material as possible so that there may be no want of stock at any time during the 'no cotton seasons' and yet obtain fair prices for the yarn, makes him spin even and fine. The doling out of cotton among spinners, as it obtains at present, tends to be no check on the deterioration of the quality of yarn. The spinner only looks to his wage and virtually reduces himself to the position of a mechanical agent. Here certain facts would be instructive. Let us examine the position as it is in a spinning area like Tiruppur and compare it with what it would be if the spinner came to be a free agent as we contemplate.

[Present position (1925)]

Cost of yarn per lb.	How made up
Re. 1-0-0 for 12 counts.	0-9-6 cost of Karunganni cotton at current price
	0-5-0 spinning wage.
	0-1-6 for establishment and other charges.

THE POSSIBILITIES OF HAND-SPINNING 169

When decentralised

Cost of yarn per lb.	How made up
0-13-6 for 12 counts	0-7-6 cost of $3\frac{3}{4}$ lbs. of seed cotton (Retail Sales price in villages)
	0-6-0 spinning and ginning wages
	(If the yarn is of better quality there will be more profit.)

NOTE The spinner in the second case also retains $2\frac{1}{2}$ lbs. of cotton seed.

The figures given above are not hypothetical but are made up from actual experience. The one fact, cotton-stocking by the spinner can of itself bring about a big drop in the prices of yarn and cloth. It brings such large economies in its train and makes it easy and possible for yarn and cloth to be marketted in larger quantities than ever. The spinner's earnings increase and the spinner himself comes to occupy his proper place in national arrangements as a free and unfettered agent working both for himself and the common cause. The production of Khadi promises to become cheaper and profitable to all parties, at one end to the consumer and at the other to the producing agents.

There are again great possibilities in economising the use of cotton itself. It is in this connection that the economics of fine and medium spinning have to be studied with great care. The count of yarn by which its

Economy in
the Use of
Cotton.

fineness is measured is determined by the number of hanks of standard length (i. e. to say 840 yards) to a pound avoirdupois. If for instance there are 20 hanks to a lb., then the yarn is said to be of 20 count, if 40, of 40 count and so on. It should not be supposed that cotton of any quality can be spun into yarn of any kind or fineness. Each variety of cotton has a particular limit of count that it can bear in the process of spinning. If stretched even slightly beyond the count that the cotton may reasonably be expected to yield, the yarn becomes flimsy and unweavable. As a rule mill-standards are not applicable to handspinning. The fibres of cotton because of the different treatment they receive in the various preparatory processes in the mills, yield results far different from those that can be had on the charkha. For example, cotton that bear a count upto 20 on the charkha may yield only 10s and 12s in the mills. The gentle handling of the fibres by the hand-spinner makes it possible for him to get medium counts even from comparatively short-stapled varieties which in the mills would be deemed suitable only for coarse spinning. In fairly long-stapled varieties the advantage lies with the handspinner. Therefore it becomes essential that the double error of spinning coarse counts out of a

fairly long-stapled cotton and that of spinning fine or medium yarn out of cotton utterly unsuited for the purpose* has got to be avoided. The Arthasastra rule penalising coarse spinning out of good varieties of cotton is salutary and deserves to be written boldly in letters of gold over the offices of all our Khadi organisations in the land.

Discussing the advisability of spinning higher counts than 10, Mr. Satis Chandra Das Gupta has these observations in his Khadi Manual.

Economics
of Fine and
Medium
Counts.

“The count of yarn we should spin ought to occupy our careful attention. There is a craze for high counts. But it would be madness on our part to go for higher counts. As this movement is intended to induce the villagers, the masses, i. e., 90 per cent of the people to spin the requisite yarn for themselves, the craze for higher counts appears anomalous. For pulling up

* The very kind of cotton grown in a particular area ought to serve as an indication of the kind of spinning prevalent. It may be that at present the cultivation of cotton is no index to the spinning practised in various tracts for the former is now dependent purely on the needs of commercial export markets. For instance the Coimbatore district in Buchannan's days was mostly growing the *Nadan* variety, one admirably suited to the coarse spinning of the peasants. But today it grows largely Karunganni and Cambodia for export purposes. It may be expected within a measurable distance of time that the revival of spinning would now stimulate the revival also of the *Nadan* crop.

the counts from 6 to 10's or 10's to 20's and 30's an example of fine spinning may be helpful but to me it appears that the position has to be restated. There are many things implied in the higher counts better cotton than is commonly obtained, more laborious preparation, and outturn of less yardage, difficult and costly weaving, these are the salient features underlying fine count spinning." While there is some element of truth in the above statement, it needs searching scrutiny. Is the formula before the country to be "more and more yardage within a given limit of time" as Mr. Das Gupta suggests or is it to be modified to any extent by any considerations of the quality of the output? This is a moot point for investigation and if the latter position is correct and the national average of spinning has to be pulled up considerably from its present level, then medium and even fine spinning may have a legitimate, though limited, place in the new ordering of things.

Speaking of fine and medium counts, we have to notice one or two essential features and limitations inherent in such spinning. A superior variety of cotton will have to be found for such spinning and the very fact that it may not be available in some parts of the country constitutes its first limitation. This is by no

Features
of Fine and
Medium
Spinning.

means an insuperable obstacle, for, it may reasonably be hoped that the growth of good indigenous staples will follow in the wake of the spinning upheaval. That apart, there are other peculiar conditions which qualify all fine spinning. There is first the progressive decline in the speed of the spinner who goes up to the higher counts or in other words the total output per charkha becomes relatively smaller than when coarse counts are spun. This difference in output is emphasised by the fact that the production of cloth does not record an increase in yardage in proportion to the rise in the count of yarn but in a much less degree. The following table* may be taken as illustrative of the results of fine, medium and coarse spinning on the charkha, assuming that it is set to work continuously for 240 hours or 30 eight hour days in the month.

174 HAND SPINNING AND HAND WEAVING

Count of Yarn.	Speed per hour. (Yds.)	Total output for 240 hrs. in Yards.	Threads in warp & weft in sq. in. of cloth woven.	Outturn in sq. yds.	Cost of cotton allowing for waste.	Spinning wage per hank.	Spinning charges.	Weaving rates per sq. yd.	Cost of produc- tion per sq. yd. (without establishment).
1	2	3	4	5	6	7	8	9	10
					* 1925 Prices. (for lbs. Cost)				
8	500	120,000	56	58	18¾	9 4 0 0 0 4½	3 6 0 0 1 6	0 5 3	
10	500	120,000	64	50	15 2 3	8 8 0 0 0 5	3 6 0 0 1 6	0 5 3	
15	450	108,000	77	37	9	5 10 0 0 0 5½	3 10 0 0 2 0	0 5 3	
20	420	100,800	92	28½	6	4 0 0 0 0 6	3 12 0 0 2 6	0 6 0	
25	400	96,000	100	25	4 4 7	3 8 0 0 0 6½	3 13 0 0 2 9	0 6 9	
30	375	90,000	110	22	3 6 7	2 14 0 0 0 7	3 15 0 0 3 0	0 7 0	
40	350	84,000	128	17½	2 ½	1 14 0 0 0 8	4 2 0 0 3 6	0 7 9	
50	320	76,800	142	14½	1 27/35	1 8 0 0 0 9	4 5 0 0 4 0	0 10 0	
60	300	72,000	154	12½	1 9 21	1 2 0 0 0 10	4 11 0 0 4 0	0 11 6	

The speed records used in the above table are those which obtain among professional spinners. They correspond more or less accurately to those given by Mr. Amalsad * textile expert to the Government of Madras in his pamphlet on handloom weaving. Mr. Amalsad has put the figure even higher for 30's and 40's but to be on the safe side in hypothetical calculations as these a mean has been chosen. As regards the spinning wage, the rule of paying by the length of the yarn is adopted. For all counts the wage shown on the table is more or less the same that is now in vogue in well-organised centres. In Tamil Nadu medium handspun yarns sell at 16 to 18 hanks per rupee and the wage taken for our calculations leaves the same results. The yarns of forties and above have at present a scarcity value and so are apt to be priced

* Mr. Amalsad has tried in this pamphlet to establish that the Charkha is not an economic proposition. His main objections to the charkha seem to be that handspun yarn does not compare in quality with mill yarn being of soft twist and largely uneven, and cannot therefore be placed in the market on the same business style as mill yarn. It is needless to add that these are not so much objections in themselves to handspinning as a warning to the nation to get to better quality. Handspun yarn 80 or 90 years ago held all Indian markets and cloth made out of it has been known for ages for its excellence, durability and beauty of texture. Even in the future handspun is likely to attain to the same degree of perfection. It is frivolous to try to argue that because particular yarns that came to the notice of Mr. Amalsad were weak, flimsy and unweavable, the whole of handspinning would become unprofitable.

far above the normal level, but this feature is bound to be temporary. The case of Pondur and Ganjam fine yarn is different. The yarn is specially of heavy twist and is spun out of local cotton treated elaborately by the spinner almost in the same manner as was done by the spinning women of Dacca of old. The quality of Pondur yarn will probably deserve more wage than is allowed here but there is no gainsaying the fact that the heavy demand for that quality of yarn whose production is at present too localised has sent up its price too.

Looking to the table, the obvious fact that strikes one at first is that so far as the volume of production is concerned higher counts yield diminishing returns. As will be observed the production passing from 10 to 60 counts, given the same hours of work shows a gradual diminution till at last the total stands almost at a fourth part of what it is at the commencement. It may seem extremely plausible to argue that the coarse counts could be produced quicker and on that account more profitable to follow up. In fact Sjt. Lakshmidas Purushottam in the course of an article in the *Young India* written in the month of September 1921 used this argument against the finer and medium counts. But he failed to take note of one or two facts which considerably modify in

Diminishing
Returns and
Increasing
Costs.

practice the diminishing returns above referred to.

(i) The first of these is that the cost of production does not rise abnormally in the case of the better count of cloth, though increasing spinning and weaving wages are paid for the finer varieties. In other words, diminishing returns in the volume of production are not accompanied by proportionate increase in costs and this though the spinners' wage and the weavers' demand all the while record a steady increase. It is conceivable that an enterprising Khadi merchant would rather aim at the production of $28\frac{1}{2}$ yards of 20 counts paying fairly high wage to the spinner than fix his business at 50 yards of 10 counts produced much faster and with less wage for the spinner. One reason for this may be that he could market the latter commodity much more easily than the former. There will also be the inducement to him to multiply the number of wheels that produce medium yarn and thus increase the volume of production. The diminishing returns in production which apparently seemed to be a factor against the medium count as contrasted with the coarse will, in practice, be modified to a large extent, for, the conditions of medium spinning are such that there would also be in them an inducement to the employment of extra hands for spinning. Further, it may

be that in some areas as in special tracts in South India only fine spinning would be possible. The spinner trained for generations to fine and medium spinning cannot get over the force of habit and it would be wrong to neglect the development of such areas that promise large results for medium and fine yarns. The very size of the wheel, the methods adopted in carding and cleaning and the abundance of leisure that the class of spinners may enjoy would militate against the outturn of coarse yarn and it would not only be advisable but necessary in the national interest to pay attention to centres where large scale medium spinning is a possibility.

(ii) A rise in the price of cotton so important a factor in production, does not send up the price of the cloth of higher counts as fast as it would do in the case of the lower. Thus if there were a rise say of 4 annas in the prices per lb. of cotton it would correspondingly record an increase of about 1 a. 4 ps. per yard in the cost of 10 count cloth while the twenty and forty count cloth would show increase only of 9 ps. and 7 ps. per yard respectively. The poor spinner who stocks his own cotton and sells yarn in open market would try to increase his count during the period of rising prices for he would thereby economise his cotton without having to forego

Rise of
Cotton
Prices and
Indifferent
Spinning.

any portion of his daily earnings. Even so the producer who distributes cotton or buys yarn would prefer to get the higher or the medium rather than the coarse count considering the economies that accrue to him.

(iii) Improvements in speed will add materially to production in the medium counts while it may also help to keep down spinning charges. The spinner's wage measured by the hank may then be reduced without detriment to his total earnings. It is necessary to try to improve the speed for medium counts. In this connection, it may be convenient to examine the method of fixing wages for the spinner. Payment by length has more than one advantage. It fixes a standard which at once measures, both quantity and quality. It furnishes the spinner with an incentive to earn higher wages while leaving him the option to limit his hours of work by aiming at medium counts. Deceit by the spinner becomes practically impossible. When yarn is bought by weight there is no discrimination made at all and the tendency in the spinner is often to mix inferior with good yarn and try to secure an average wage on both. Worse still when yarn is delivered in cones the coarse layers underneath may easily be covered over by thinner layers on the surface and it is by means

Speed Tests
and Wage
Standards.

of such deceit which went unsuspected that one at least of the big Khadi producing centres of the Ceded Districts sustained heavy business losses and was almost reduced to the miserable plight of closing down. There is, however, one limitation to this rule of payment by length. While exceedingly helpful for the fixation of wage in higher and medium counts, in the case of very coarse yarn its application becomes unnecessary. Custom in the country has it that fine yarn is sold in hanks while the coarse is sold by weight. For tens and twelves it would be unnecessary to insist on hanking. Moreover, where the custom of the spinner is to sell only by weight it would be unwise to disturb it.

(iv) The most striking economies in the spinning of medium and higher counts are to be seen in the spheres of individual and voluntary spinning. An individual given 240 hours to spinning in the year would be able to provide for himself cloth of fairly thin and good texture at almost negligible cost. It is here that handspun clothing had a decided advantage over mill products for without spending more labour than about $\frac{3}{4}$ th of an hour per day an individual can easily provide cloth for his own needs and even more at a cost infinitely cheaper than that of the mills. It is necessary here to repeat the table of

Fine Spinn-
ing and
Voluntary
Effort.

THE POSSIBILITIES OF HAND-SPINNING 181

counts in so far as it relates to costs once again.

Count of yarn.	Cost of cloth per sq. yard. given free spinning.
8	0 4 5
10	0 4 3
15	0 4 6
20	0 4 9
25	0 4 6
30	0 5 0
40	0 5 0
50	0 5 3
60	0 5 6

Thus it will be noticed that cost to the individual spinner remains almost stationary for all counts. Mr. Tallents of the Behar Government makes the surprising statement in the Census report of 1921 that Khadi would be more costly than foreign or mill cloth even if the cost of spinning were nil. This is obviously absurd. As may be noticed one Charkha for every family of five in India working 2 to 2½ hours a day is enough to make it self-contained in the matter of clothing. It is but natural that in these circumstances the individual or the family spinning for home use would necessarily choose to work on the most advantageous count that gives enough of clothing without unduly encroaching on their time. The leisured classes may choose the higher count spinning for pleasure as well as for home consumption while the farmers and the like whose spare hours are far less may take to the coarser count. According to Dr. Buchanan precisely the same state of things obtained in

1806. There was then a surplus abundance of medium and fine yarns put into the market even by the farming classes. Considering all this, we may say that the national mean for spinning would be somewhere immediately above the twenties. If our total output of Khadi averaged on that mean it would certainly be profitable for the country. This does not mean that all yarn produced should be of that given count but the need is only that the total output should average on the mean.

The economies in spinning as in every other handicraft are to be found in effective decentralisation. The first step in it, the stocking of cotton by the spinner himself having been considered, we now proceed to the second, that of marketing the output of the spinners and weavers together. This will be done when the old weekly yarn markets revive in the country. It is fast coming to be a custom among spinners in some parts of South India to sell yarn. This is one step in advance on what obtained at the commencement of the new movement and so much nearer the ideal. The open market where spinners and weavers freely meet and strike bargains is yet far away and may not be reached before Khadi becomes the general wear of the country in most areas. It is under these conditions the middleman, will come to be eliminated. It

Sale in Open
Market.

is doubtless true that the middleman now serves a useful purpose in that he acts as a link between the spinner, the weaver, the consumer and the cotton merchant, but he will find himself fast eliminated as the country marches forward to the system of open markets. The constant bringing together of the weavers and spinners will certainly hasten improvements in the quality of yarn. When yarn fairs come to be the general order of things, then it will be time for the weaver to interest himself much more actively than he does to-day in the Khadi movement.

Where yarn is sold directly or in areas where the spinner does both carding and spinning himself, the price of yarn appears more favourable than in areas where every process has to be undergone separately and Khadi is yet in its infancy.

Place.	Count of Yarn	Price per lb 1925			wage how paid	Remarks.
		Rs	A	P		
1. Nagalapuram (In Kurnool)	20	1	10	0	by warp	spinner stocks his own cotton & does everything including warping.
2. Tirupur (Coimbatore Dt.)	10 to 12	1	0	0	by weight	Spinner does carding also
3. Amreali (Gujarat.)	6 to 10	1	4	0	do	no decentralisation.
4. Kalikeri (Chittor Dt.)	8 to 10	1	4	0	do	do

In the last centres which have been taken at random as representative of new production centres, the prices of yarn are higher because the spinning wage that is paid is exclusive of charges for carding which in Nos. 1 and 2 remain merged in the spinners' earnings. Our aim then should be the elimination of charges incurred in all processes which can be easily covered by the spinner himself.

As our movement is intended to serve the purpose of a "voluntary, prohibitive tariff" against foreign cloth the nation will have necessarily to see to it that it is properly developed in its initial stages. In order to lift the industry to a prosperous level, the nation has not merely to create and foster sentiment in favour of Khadi, but has also to assist it even with bounties and other aids. What then is that bounty or aid which will effectively promote the movement? Already the purchaser of Khadi is paying a higher price for goods that he takes and in that sense is contributing a small money bounty on every purchase made. So long as the State is antagonistic and unwilling to help and protect this industry or the upper and middle classes will have to extend to it their philanthropic protection. But the best bounty is naturally that which goes directly to increase production and at the same time cheapen it, or in other

Voluntary
Spinning.

words *Khadi can only be cheapened by more Khadi*. Voluntary spinning is the truest of all national bounties. The cumulative effects of individual effort are best exemplified in an endeavour such as voluntary spinning. Voluntary spinning is the bounty of all for all. It liberates spinning to a large extent from its present centralised condition. It aims not merely at gathering volume for Khadi activities but also tries to spread it over the country. The attempt here is to keep the activity of spinning sustained and uninterrupted. Fine yarn can be put into the country in fairly large quantities by voluntary effort and when that comes to be, the present exaggeration in the price of such yarn will disappear.*

Apart from voluntary spinning there may be other aids to stimulate the volume of production and sales. A bounty on retail sales such as that in force by virtue of a resolution of the All India Khadi Board is an invitation to traders and businessmen to increase their investments and interest themselves in the marketing of Khadi. Its results even under the most favourable circumstances can only have an indirect bearing on production. The small investor may by increasing his capital profit by the

* The question of voluntary spinning can be considered even from other points of view. That it can render Congress work financially self-sufficient, if properly organised, was ably demonstrated by Mr. K. Santanam in his essay published in the 'Young India' of January 22, 1925.

bounty to a small extent while the big businessmen may come to look upon it merely as a partial insurance against the risks of trade. The bounty may also succeed in fixing the sale price of Khadi at some ascertained relationship to the cost price. If, however, the bounty happens to be small, it may not attract considerable attention. If the bounty is to be effective it must be substantial. The idea of Khadi markets must be developed alongside of yarn fairs. Any bounty that helps to carry Khadi into the village fairs, be it in the shape of a business commission or otherwise, would be very helpful. It may be easy enough to spread the sale of Khadi in thickly populated towns but to carry it into the country where ultimately Khadi will have to find its biggest market, requires great and persistent effort. And patriotic sentiment once cultivated in the rural areas, will not lightly be displaced. Workers who make it their primary task to nurse such a sentiment among farmers and agriculturists and other village artisans need to be substantially assisted with bounties of some kind or other. The village hawker will have to be not only a businessman and trader but a live propagandist as well, if he is at all to be successful*.

* The extension of credit facilities and a well-regulated system of pledges, loans and purchases will keep production going even during the dull seasons for sale. But these are not dealt with in this essay as they are mostly related to the application of more capital and the development of banking facilities.

As contrasted with bounties on sales, there may be other bounties that will touch the spinners and weavers directly. A bounty that goes to the spinner himself will have necessarily to be one such as would ensure an increased output and consumption of Khadi. It may take the shape of an inducement to the spinner to make his own clothing in preference to disposing of part of his yarn. For instance, a maximum limit of 12 sq. yards per head may be fixed for the purposes of this bounty and weaving may be done either free or at half rates up to this limit for the benefit of the spinner who stocks his own cotton and makes the thread. There is enough inducement in a bounty such as this to take effect once it is experimentally introduced into areas where the spinner is already stocking his own cotton but does it merely to enable him to work through the year and dispose of the yarn. The bounty, if it is to be half the weaving charges, would amount to 10 to 12 annas per spinner and if in any area selected for the operation of the bounty twenty to thirty thousand spinners elect to take advantage of it, the country would have helped to produce and dispose of with the minimum establishment charges 1 to 1½ lacs worth of Khadi with an initial outlay of about Rs. 15,000 to Rs. 22,500 or nearly 12½ to 15%

of the anticipated output. There is need to impress the spinner that he too has to do for himself what he would have others do for him. Today most of the spinners who are in our movement have hardly been touched by it. They still wear foreign or mill-made clothing. They have to be taken to the old familiar track of domestic spinning, now alas forgotten. It would not merely be worth while but it would be our imperative duty to strengthen the movement that is now on at its weakest and most vulnerable point and induce reform from within. Spinning practised as part of domestic duty and routine will revive the taste for Khadi however defective and coarse it may be. Therefore, if Khadi has to find its root in the villages, every facility that we can give to the growth of the movement must touch its primary limbs, the spinners and weavers.

As is the case of spinner, so too is that of the weaver. The handloom weaver is and has for ages been an asset to the country. The industry of handloom weaving is still the most important in the land next to agriculture, giving as it does employment to nearly 60 lakhs of people. The handlooms in the country still give us a fourth part of our total cloth requirements and nearly three-fourths as much as our mill-production.

The
Weaver's
Bounty.

In the year 1923, for instance, the Indian hand-loom production was estimated at 1103 million yards out of the 4305 million yards consumed in the country. The supreme importance of this premier cottage industry has to be more widely appreciated than it is today among the educated classes. The hope of India lies in raising the handloom to a still higher position and in linking it effectively with the spinning wheel. Both the loom and the wheel have to stand together, for the status of the one depends upon that of the other. The handloom weaver has not been slow to realise this in some parts of the country but generally it must be confessed that he is still fighting shy of handspun yarn. This is not because of any aversion he feels to hand-spinning. He cannot gauge yet the stability of the new movement and if he feels any affection at all for it, it is still only that of an onlooker. His attention has yet to be drawn to the fact that he can find his proper role as a village artisan only in case he helps in the revival of village prosperity through hand-spinning. He does not yet see that it is only the spread of hand-spinning that can release him from the double bondage to which he is now yoked, that to the foreign or indigenous mill-owner and to the sowcar or money lender in the town or village. He does not see other facts too which tend to diminish his earnings. His

real wage has gone on diminishing all these years. The effect of this is so telling that the number of looms are seen to go down in the country. The weaver has little or no capital of his own and he has necessarily to rely on some capitalist or other to finance him. He has also to face the unequal and continuing competition of the foreign and Indian mills. He is no longer the free agent that he once was in bargaining for the prices of his output. Some suggest financial help to the weavers through the setting up of co-operative societies. This may be good so far as it goes. But it does not enter into the root of the problem. What the weavers do need is more and more work and opportunities to utilise the labour of their families and the security of continuous employment. If they will only take to hand-spinning, they will not have to face the difficulties and risks involved in seasonal production such as they are now engaged in. When the village spinning wheel begins to hum, the village weaver will have no lack of employment at any time. Further, he will not also have difficulties in the way of marketing, for the consumer would mostly be at his own door. Those who, like Mr. Amalsad of the Madras Government contemplate the preliminary processes of weaving such as warping, sizing, reeling etc being simplified by the introduction of small sizing machinery seek not to

ameliorate the condition of the weaver but will merely put the members of the weaver's family who now assist him in partial unemployment. The real wage of the weaver is already low. Dyeing which in ancient India was being entirely done by the weaver is now taken off his hands. If bundling, reeling and sizing of yarn were also to be taken away from him, in many cases he would suffer irretrievably. The revival of handspinning will give him increasing employment and will be the surest means to the weaver's emancipation. His real wage will increase and he will be pulled out of the present awkward position where he is ground down between the upper stone of the mills and the nether stone of the capitalist and the financier. If only he has the will, the weaver can by a system of prudent deposits build up a huge co-operative society round the spinning wheel and can, in course of time, make hand-spinning his own trade. For instance, in the Tirupur area it is already noticeable that the weavers' investments in the khadi movement on the average come up to Rs. 25. per loom. An extension of such a system of deposits will immeasurably benefit both weavers and spinners. It will have the effect of stabilising khadi production in the villages. More weavers will then settle in the villages and not desert them as they are now doing.

Even here, the weavers may be offered inducements to take to hand-spun yarn. Where he is now averse to using charkha yarn, a bonus may be placed within his reach. A lump gift for each output of an ascertained number of yards per loom may usefully be tried in some centres. But even this would not be necessary if merely by the rapid spread of spinning and the force of propaganda local facilities for weaving hand-spun everywhere are pressed into service.*

The exclusion of spurious khadi has come to be a problem in certain parts of the country. The fraud is encouraged in the mills or in the looms of the weaver who uses, coarse mill yarn. A close and searching examination of the cloth turned out may discover the flaw in it but it will not prevent the perpetuation of fraud. The same remark applies to certification of goods. The real safe-guard, however, which will keep Khadi above reproach is to go to the root of the production and tackle the output from there. The source of yarn must be kept unsullied and pure; otherwise the evil will constantly recur. When there is the knowledge of deceit being practised in some area,

* Besides spinners and weavers others too may help in the revival of this industry. Those in the villages who grow cotton may give cotton gifts and others who are in towns and are capitalists may help by furnishing capital to the industry.

THE POSSIBILITIES OF HAND-SPINNING 193

either by merchants or by weavers, the ascertainment of the following facts may prove to be of great value. (1) A rough estimate of the total number of spinning wheels working in the area and their maximum capacity for production; (2) the import of yarn, if any, and the places from which such import is made; (3) the customs of the weavers and the state of their organisations and (4) the extent of the export trade in khadi carried by merchants in that area. In the final instance the weaver has always to be dealt with and he alone must be so organised as to be an effective check on the mixing up of fraudulent yarn. A problem such as that mentioned above can only be a temporary phase of the new movement, for, as it gathers strength and volume, it is bound to disappear of its own accord.

Artificial aids can nourish the movement only for a time. No industry can be made to rest for long on such assistance; it must ultimately derive its strength and nourishment from within. In every respect the repetition of old conditions so essential to the revival of universal spinning may not be found possible. Even if found possible, they may not be useful in some instances. Improvements on them may have to be sought. It will easily be realised how every addition to the speed of the charkha or to the capacity of a carding bow would be

Trade
Museums
and Training
Institutes

a blessing to our movement, for, it heightens and improves quality without complicating the essential processes. Research in the study of implements and their working has to be carried on in every province. The cumulative results of seemingly slight improvements often escape our attention. If, for example, an improvement in speed of 50 yards per wheel throughout the country could be secured, say as a result of a slight adjustment in the quality of spindles used, there will result an increment of twenty million yards of yarn or nearly 1400 lbs. per day in our present production, even taking it that only 1,00,000 wheels are being worked in the country. Improvements in carding will bring about equally striking results. To raise the capacity of every bow in the country is directly to increase the volume of spinning. The use of the bow by the spinner himself which at once enhances his wage and secures to yarn the advantage of improved quality has to be spread in places where it does not now obtain. In spinning fine and medium counts, the quality of carding becomes all important. The usefulness of a training in carding to workers in rural areas cannot be exaggerated. The setting up of training schools in all districts may not be feasible all at once but some attempt ought to be made to cover spinning areas in each province through itinerant

and expert parties and place within reach of all of them training facilities in respect of carding, spinning and ginning. Simultaneously with this, each province should develop a trade museum of its own. Sets of samples of all kinds of production of cotton, yarn and cloth should be available therein for tests and experiments. They should also be a guide to traders in the province. They will easily serve to discover from year to year our failures and improvements and suggest remedies for the former if any. The holding of frequent exhibitions, demonstrations, and the collection of trade museums would doubtless be of the utmost value.

All that has been said so far relates only to the possibilities of spinning in the near future. But a study of these very possibilities of hand-spinning in comparison with the mill industry will discover more points which may help the nation in making its choice in the matter of hand-spinning. Here are two distinct types of industry, the one aiming at effective centralisation and the other at progressive and growing decentralisation. The spread of hand-spinning acts even as a shower of rain distributed evenly and over a wide surface while the erection of mills and the building of a centralised staple industry seems like erecting so many dams across a river or other

Comparison
with the
Mills.

rushing water-course in order to counter the flow of water with a view to the diversion of part of it for useful purposes. The progress in the case of these two industries is in quite opposite directions and the economies in each vary in their nature with the direction taken.

Before seeking to determine the question as to which of the two types of industry would be more fruitful and economical to the nation, it is necessary to take a short survey of the rise and growth of the mills in India in order to understand their true bearings on our national needs and welfare. Though the first cotton mill in India was established as early as 1838 in Calcutta, it was not till 1853 when the first mill was set up in Bombay with 5000 spindles that the production of cloth by steam power came to be a feature of Indian industrial life. The decline of the old cottage industry consequent on the rising foreign imports of cloth was sought in a manner to be compensated by the starting of cotton mills. The infant industry passed through a very severe trial during the American war when there was a phenomenal rise recorded in prices for raw cotton, as high as Rs. 600 at one time for a candy of 784 lbs. But after the war, when its reactions on price had disappeared, the mills began to increase in number till in 1882 they were 62 with 1654103 spindles and 15116 looms

Progress of
Mills.

THE POSSIBILITIES OF HAND-SPINNING 197

employing 53624 persons in all. Lancashire was even then up against the industry and as a result of its agitation all the import duties on cloth in India were abolished. Still the Indian mills continued to flourish. They had by then built up even an export trade in yarn and cloth. Later years saw quicker developments and the following will give an idea of the progress made during the period from 1880 to 1924.

Year	No. of Mills	Authorised capital	Spindle strength	Loom strength	operatives
1883-84	74	81,677,250	1,895,284	16251	61835
1893-94	138	113,300,840	3,539,681	29392	130570
1903-04	206	154,878,050	5,167,608	45281	186144
1913-14	264	215,023,050	6,620,576	96668	260847
1923-24	333	near 40 crores.	7,927,938	144794	343876

It is unnecessary to dwell at length on the growth of the mill industry during the last forty years. Suffice it to say that it was not all smooth sailing. Especially during the closing years of the last century the mills had to face several crises. The jealousy of Lancashire which resulted in the imposition of the excise duty, the plague in Bombay and the consequent scarcity of labour for a time, the years of drought as in 1900 which curtailed the supplies of raw cotton, and fluctuating exchanges, each one of these factors had its own effects on the growing industry. Yet the mills made steady progress. In the year 1913-14 the production of

yarn stood at 682773000 lbs. and that of cloth at over 1500 million yards. Ten years later in 1922-23 the figures for yarn were 705848000 lbs. and for cloth 1725 million yards. The years of the war afforded the opportunity to the mills to increase their output, the temporary shrinkage in imports from Lancashire having opened the market here for the consumption of indigenous cloth. But there was the compensating disadvantage that the erection of new plant could not be done to any appreciable extent. Anyway the years after the war left the mills with large markets in India and their present production of cloth as compared with what obtained ten years ago has increased by nearly 40%.

Average of 1912-13 to 1914-15	Average of 1915-16 to 1917-18	Average of 1918-19 to 1920-21	Average of 1921-22 to 1923-24
1172 million yds.	1544 million yds.	1557 million yds.	1670. million yds.

Of the yarn consumed in India the mill production amounts to nearly 92 per cent of the total, while in the out-turn of cloth of all sorts it comes to slightly more than the foreign imports in quantity though less in value and comprises nearly 25 per cent of the total cloth used in the country. Yet the industry has not reached anything like such vast proportions as in Great Britain. At the end of 1921 for instance Great Britain had over 100 million spindles and 790,000 looms or

nearly 10 and 7 times the spindle and loom strength of the Indian mills respectively. Though the mill industry in India has not anything to compare in point of magnitude with its prototype in England, yet its present position is such that the view is growing up in the country that an extension of this industry will be more fruitful of results and will be of greater economic value to the nation than any attempt at the revival of hand-spinning and weaving. This view needs to be carefully examined if only to discover which of the two, hand-spinning and khadi production or power spinning and mill output, will result in greater benefit to the nation. Such a comparison must rest on the basis of four or five chief factors essential to all industrial enterprise, the capital needed, the time required for expansion, the cost of production and cumulative savings to the nation and finally the social reactions of both on the community at large. Each of these factors can be considered individually and also in their relationship to the rest.

Let us first take the question of capital
 Capital and the time needed for expansion
 Needs. both in respect of the mills and of
 the hand-spinning organisation.

The present capital of the mills is nearly 40 crores and with the help of this an output of 700 million pounds of yarn is being secured,

This production gives us an average rate of 100 lbs.* per spindle per year in the mills. It is here important to note the average count the mills are spinning in India. If we take the figures for 1922-23 we find for instance that out of the total production 13 % is from 1 to 10 counts, 56 % from 11 to 20 counts 28 % from 21 to 30 counts and 3 % above 30 counts. The average of these figures may be taken as from 15 to 18 counts. We know the average production per spindle on the charkha, taking it that the count of yarn is 15, would be slightly less than $\frac{1}{4}$ a pound a day giving 80 lbs per year.† If of 10 counts, the output for every spinning wheel would certainly be from 120 to 130 lbs. a year. But the higher count is taken here to institute a fair comparison. So then the mill product of 700 million lbs. of yarn can easily be reached by 90 lacs of charkhas worked full time in the country. The capital that will be needed to work them even assuming that they have to be made all afresh—this will not be the case for lacs of old charkhas are still spread wide over the land—would not amount even to a tenth part of that already spent over the mills. The

* The average production in the Indian mill was rarely over 100 lbs. per spindle per year. It has even been less in some years. The utmost that it has ever reached is 124 lbs. per year.

† This assumes that the charkha is worked eight hours a day.

charkhas are there and most of them in the farmers' homes. In setting the village wheels in motion there is no need for such enormous sums of money as have been already spent and are still being spent every year on the import of plant and machinery. Then again as regards the cotton needed to feed the rural spindles it can easily be secured without all the wasteful expenditure over transport, insurance and other charges, once the organisation is perfected for hand-spinning. The nearest rural weekly market or the farmer's home itself will find the raw material for the hand-spinner under ideal conditions.

The costs of an average mill spindle and loom were Rs. 65 and 900 before the war but present prices have mounted up as high as Rs. 100 and Rs. 1100 respectively. In other words the mill spindles giving almost the same outturn as the charkha cost 25 times as much. It is not to be forgotten however that the efficiency of the mill spindle may still further be increased. In yarn of finer counts the mill spindle has the decisive advantage. It is possible to produce 7.20 oz. per day of 20 counts on the mill spindle, that is to say nearly double the out-put on the charkha. All the same, the disparity in the costs of setting up is staggering. For every one spindle set up in the mills we can add 20 to 25 in the rural

The Fallacy
of Speed.

homes given the same capital. What applies to the mill spindle applies to the power-loom as well. The average production of the power-loom in a mill may be taken at 12000 yards in the year. This does not compare favourably, relative to its cost of setting up, with the production on the hand-loom which can well be over 1200 yards in the year. The results as to the relative productive efficiency of mill and hand-power, taking the costs of setting up into account, may be summed up thus :

	Mill power	Hand power
Hours of work in the year	2,920	2,920
Output per spindle	100 to 120 lbs.	90 lbs.
Count of yarn	15	15
Cost of spindle	Rs. 100	Rs. 3 to 4
Percentage of efficiency relative to costs	100	2,400
Outturn per loom	12,000 yds.	1,200 yds.
Cost of loom	Rs. 900	Rs. 20
Percentage of efficiency relative to costs	100	450

Whatever be the relative efficiency of hand and power spinning it may be argued that that which is more capable of easy expansion is the mill industry. Though the mill industry has been growing for years its possibilities for future expansion need to be carefully looked into. In recent years it is true the mills have lost their export markets in the East but still they have a large field left for their expansion even if they intend to make an effort to secure a monopoly over the Indian market and

The Future
of the Mill
industry.

substitute foreign imports with their own production. Let us even assume for the moment that the differences in price between foreign imported cloth and Indian mill production act as no obstruction to the latter's progress. The Indian mills, let us further assume, have only to replace by their production 1500 million yds of cloth and 58 million pounds of yarn now imported from abroad. Merely to effect this increase, even if the average out-turn of the mill spindle improved to 120 or 150 lbs. in the year, an addition of 3 to 4 million more spindles would be needed in India. The number of power looms would also have to be similarly doubled. But can this be achieved within any reasonable measure of time? It looks exceedingly doubtful in view of the experience of the last ten years from 1913 to 1922 and the rate of progress made during that period. The progress of the mills since 1913 may usefully be contrasted with that which obtained in years before.

Year	No. of mills	No. of Spindles	No. of looms
1888-89	109	2463642	22156
189-499	174	45463342	37228
1909-10	245	6142551	80171
1913-14	264	6620576	96668
1914-15	255	6598108	103311
1915-16	267	6675688	108417
1916-17	267	6670162	110812
1917-18	269	6614269	114805
1918-19	264	6590918	116094
1919-20	263	6714265	117558
1920-21	255	6752474	117953
1921-22	271	6814223	128314
1922-23	289	7245119	137238

It will be noticed that progress in the earlier decades was very marked. From 1913 onwards the rise in the spindle and loom strength bears no relation to that in previous years. Since 1917-18, the number of spindles has remained practically stationary except for a small increase of 400,000 in 1923. This may be accounted for partly by the fact that the erection of new plant became difficult during the war period. However, this handicap has not since disappeared owing to the rise in the price of machinery and the prohibitive costs of setting up additional spindles and looms. Added to this are other difficulties, the reactions of an unfavourable exchange position on the industry and the risks of additional investment in the business. The future is not all very bright. The last two or three years have been distinctly adverse to the mills and probably mark the commencement of a reaction against previous years of prosperity and profit. In 1922 profits sank by more than 50 % compared to 1921, while in 1924 the margin of profits so dwindled away as to leave large losses in most cases. There is an unprecedented depression in the industry, which may take years to clear. There is no reason to assume that in the face of present circumstances, the prohibitive costs of setting up new plant, the shyness of capital and an adverse exchange position, the rate of progress

in future years will be anything better than that which marked the years 1913-23. During that period the looms and spindles rose by 40 and 600 thousand respectively. Even if the same rates of increase are assumed for the future, the mills will take no less than 30 to 40 years to add 3 to 4 million spindles to their present complement. If we take the production of cloth we notice that the annual rate of increase in the mills is about 50 million yards and it is needless to add that though this progress comes to be continually manifested, 30 to 40 years again would be needed to add the 1500 million yards or so that now form the imports into the country.* The problem is not however so simple as one of filling up the imports by pushing up production. It is one of expansion in the face of numerous financial and political difficulties. The dependence of our mills, almost perpetual on foreign plant, machinery and working staff acts as an insuperable obstacle in their way. The production of cloth and yarn of finer count would also mean the dependence of

*Mr. K.T. Shah of Bombay estimates that with an additional capital of 15 crores the Mills can be made to produce what would be needed to cover up imports. He states no reason why he arrives at the figure of 15 crores. His figure is a gross under-estimate. In fact if only present costs of machinery were to be taken into account the addition of 3 to 4 million spindles and nearly 80000 looms to the Indian Mill complement would need more than double that capital outlay.

the mills on supplies of cotton from other countries. Given even the most efficient management and up-to-date machinery, it would not be possible to push up the Indian Mill position to any extent and make it reach that ambitious goal of all of us, the complete stoppage of foreign imports.

We may now proceed to an examination of two other important factors in the cloth industry, the costs of production and the cumulative savings to the nation which accrue through the medium of the industry. These two have necessarily to be considered together in order to get a true perspective of things. One or two general features may be noticed before we proceed to enquire into comparative business costs. In the first place it must be remembered that in the case of all centralised industry like the cotton mills the main thing sought is the attainment of greater speed in production with diminished costs. By the introduction of high grade machinery or labour saving appliances, the producer manages to secure both internal and external economies and thus to lower the costs of production. In the case of a handicraft the endeavour is not so much to lower costs as to eliminate them wherever possible. The producer is in some cases the consumer too, and when it is so, as among individuals spinning for their own or

Elimination
of Costs

family use, the cost of production is partially eliminated. The cost of spinning is then nil and the price at which cloth can be had merely represents the weaving wage plus the price of cotton. The price of cloth for individual spinners as we have seen already remains stationary for all counts. Here is unrivalled cheapness which neither the Indian nor the foreign mill can ever reach. But this is a case of *elimination* of costs, not of lowering them, of labour saved for the use of the home, not of labour displaced by the installation of speed appliances. The indisputable superiority of hand-spinning consists in the fact that it offers an opportunity for such elimination as is noticed above, which in effect means the full utilisation of all latent productive ability in the country.

There is no gainsaying the fact that in the centralised production of the mills, prices for piece goods as they stand to-day are considerably lower than in the khadi manufacturing areas. In the very best centres for khadi the cost of production of white pieces stand at 6 as 6 pies for 36 " width, 8 as 9 pies for 45 ", 10 as for 50 " and 10 as 9 pies for 54 ". Mill goods of the same count and texture would show much lower costs, possibly the proportion of difference may be somewhere as 1 to 1 $\frac{3}{4}$ or even more.

Compara-
tive Costs.

208 HAND SPINNING AND HAND WEAVING

The differences in the price of yarn make the position clear.

Count of Yarn	Price of Hand-spun per lb as 13 to 14*	Price of Mill-spun per lb as 8 to 10
10 to 12		
20	Rs. 1 8	Less than Re. 1
30	Rs. 1-14	Less than Rs. 1-2

This marked difference in price may be looked at even from the point of view of the actual spinning charges incurred. In the Indian mills the average spinning charges roughly come to as 3 or thereabouts per lb. The working costs of spinning may be estimated as follows in a mill.

SPINNING DEPARTMENTS	COST PER lb. IN PIES
Sundries, engine and boiler mechanic etc.	3'08
Blowing room and mixing	1'00
Card room	'75
Frame drawing, stubling, intervowing	3'25
Ring Throstle 18-20 h.p.	9'00
Reeling	1'00
Bundling and baling	'25
Stores	6'00
Coal	4'00
Establishment charges	3'00
General charges. (Interest and over-head charges etc.)	6'00
Total	... 37'33

As against this the average charges paid to the spinner of 10 to 12 counts handspun yarn exceed 4 as to 4 as 6 pies even without taking the establishment charges into account. For weaving too the mill costs are comparatively lower than those paid to the handloom

* The cotton used for spinning this yarn is much superior to that used in the mills.

THE POSSIBILITIES OF HAND-SPINNING 209

weavers on khadi. The estimate of working costs for mill weaving may again be put down as follows :—

PROCESS	COST PER lb. OF OUTPUT
Winding, Warping & Sizing	4'50
Weaving	17'00
Folding and Calendering	1'50
Stores	9'50
Coal	2'75
Establishment charges	2'50
General charges	8'00
	<hr/>
Total	... 45'75

This leaves about as. 4 per lb. but the hand-loom weaver gets more than 6 annas per lb. All this, however, does not imply that it would be impossible to bring down khadi prices to a lower level. With the standardisation of wages, both for spinning and weaving, the stocking of cotton by the spinner himself, improvements in output both on the loom and the charkha, and the very increase in the volume of production generally, there will result far reaching economies which will make khadi price levels compare more favourably. Even the last two years witnessed considerable improvement in khadi prices which have moved down from annas 11 in 1922 to annas 7 a yard for 36", from 12 annas to 9 annas for 45" width, from 14 annas to 10 annas for 50" width and from nearly a rupee to annas 11 for 54" width. This has to be accounted for partly by a fall in the prices of

cotton. The cheapest producing centres have also shown a tendency to develop decreasing costs. But this is not all. Prices must also be looked at from the point of view of the durability of the product. It is not easy to dogmatise about the durability of khadi. It is, however, clear that when theoretically considered yarn spun on the wheel and cotton carded on the bow ought to yield better results than they would in the mill processes. One expert of the Indore State, it would be interesting to know in this connection, has come out with a pamphlet entitled "Charkha Yarn" so ably written and with scientific precision wherein a comparative study of the respective processes undergone under conditions of mill and handpower is made only to come to the definite conclusion that the latter is to be preferred in every respect to the former. It is well known that the quality of khadi in India years ago held the palm easily against imported cloth. Writer after writer spoke admiringly not only of its cheapness but also of its durability. As late as 1866 Mr. Forbes Watson admitted the superior qualities of cloth made out of native yarn. Well-earned testimony such as this of former years will doubtless be true even of the future when the industry comes to be placed on sound and unassailable foundations and its best features begin to assert themselves.

THE POSSIBILITIES OF HAND-SPINNING 211

A comparison of costs, such as has been instituted above, would be absolutely misleading, if it were not accompanied by a searching examination of the larger economies accruing to the nation both out of mill and hand-spun production. What is gained by mill production in one direction, the nation may be losing in a hundred other directions and the net national return may not be as large as otherwise it would have been. The mass of consumers compelled to purchase mill-made clothing is possibly paying enormous sums to extraneous agency, which may be avoided if the manufacture was through hand-spinning and hand-weaving. Any such charges annually incurred in mill production and whose entire or partial elimination would be both easy and practicable really represent a drain on the country's resources. Here are some items of such avoidable drain.

Item of Expenditure	Amount spent	Percentage that can be eliminated in hand-spinning
1. Cost of transporting mill yarn & cloth including freight, insurance & middlemen's charges	Rs. 3½ crores	50%
2. Cost of transporting 20 lac bales of cotton to mills plus insurance & middlemen's charges	Rs. 4½ crores	50%
3. Import of mill stores & Machinery	(Varying figure) Average of last 4 years from 1919-20 to 22-23 50 lakhs	100%

212 · HAND SPINNING AND HAND WEAVING

Item of Expenditure	Amount spent	Percentage that can be eliminated in hand-spinning
4. Excise duty (now abolished)	210 lacs	100%
5. Income & super tax	50 lacs	100%
6. Local & municipal taxes	12 lacs	75%
7. Municipal taxes & water rates	15 lacs	100%
8. Depreciation charges	70 lacs may be taken as average	100%

Items 1, 2, 3, 5 and 8 do really constitute a severe drain. Taking the import of textile machinery the figures for the last four years are very instructive.

1919-20	1920-21	1921-22	1922-23
27,853,260	64,505,810	120,633,056	6,708,030

Owing to dependence on foreign plant and engineering skill the mills have to make large investments for improvements and replacements. One point to be noticed however is that the costs of setting up are more than double in India than in England. This is not the only difficulty. The future progress of the mills means nothing less than perpetual looking up to assistance from foreign countries and this again is a great impediment. The taxes paid to Government and other agencies amount nearly to 3 crores per annum and even if the excise duty were taken as good as withdrawn there would still be left a crore of rupees to the nation. Transport and other sundry charges, which can in a large measure be eliminated in the event of hand-

spinning coming to be adopted universally, cost at present 7 to 8 crores of rupees. Besides these, several other items of expenditure like advertisement and overhead charges can very well be minimised under conditions of hand-spinning. The cumulative savings accruing to the nation can also be looked at from quite another point of view. Analysing the various items that go to constitute the working costs of production in the mills we can find the percentage of avoidable expenditure under conditions of hand-spinning to the nation. The following presents such an analysis for five at least of the typical mills in Ahmedabad city.

Items in the cost of Production.	Gujarat Spinning Mills.	Bharat-khand Cotton Mill.	Ahmedabad Mani-chand.	Ahmedabad New Cotton.	Raj-nagar Mills.	Average per-cent.
1. Wages	15.9	17.6	16.5	14.8	21.2	17%
2. Stores	18.3	8.8	9.7	11.4	11.2	12%
3. Fuel	3.6	4.1	3.4	3.1	3.6	3.5%
4. Interest	1.2	2.9	2.6	3.4	-----	2.5%
5. Commission	1.3	2.9	4.3	4.0	-----	2.5%
6. Taxes	9.9	5.9	7.1	3.1	4.2	5.5%
7. Cotton	44.2	50.0	48.0	53.5	6.40	53%
8. Depreciation	5.1	2.9	2.3	2.8	-----	3%

The charges on fuel, insurance and commission, taxes and depreciation cover nearly 15% of the costs in the mills. Hand-power, though it may have to be paid for far more heavily both in spinning and weaving, will certainly save for the nation all the wasteful costs in mill production and leave a wide

field for securing large national economies. Considered this way, hand-spinning and hand-weaving ought actually to be deemed less costly to the nation as a whole than mill and power production.

When the strictly economic aspect is considered there is still the larger and more important question of the social reactions of the respective industries on the community at large. It is obvious that the mills do not even touch a fringe of the population in the matter of providing employment for it. The total number of men directly employed as labourers in the mills does not at present exceed 400,000 and even if we add to this the large number of brokers, middlemen, retailers and others dependent on the industry, the figure will not possibly exceed a million souls. This bears no relationship to the vast numbers employed even in the handloom industry, not to speak of those who wait for employment and subsidiary occupation in the shape of handspinning. The mills even if they double their number would be utterly inadequate to provide any appreciable living for the masses of the poor in the country. In fact the expansion of the industry and the increase of more labour-saving devices can only limit the scope of direct employment still further.

Social
Reactions on
the Commu-
nity.

India demands not the concentration of wealth in the hands of the few but its just distribution among the many. India demands again an immediate solution to the problem of wide-spread unemployment. The poor agriculturist population all over the country must find a supplementary occupation suited to their social and environmental conditions. The mills cannot fulfil the national object. However efficient their output, they can never help in the equitable and even distribution of wealth in the land. They localise production in place of spreading it out and placing in the reach of all the poor and the needy a suitable occupation that will give them their sustenance. The revival of hand-spinning offers the only unique opportunity for massing the labour of millions now in penury due to enforced idleness and putting to productive work the inherited skill of centuries, fast dying out and starved. The millions will then get such work as would leave no room for moral or material discomfort. The horrors of the slum which are unknown to the rural artisan population are the inevitable concomitants of mill concentration wherein there is no escape from moral deterioration or physical ruin. The toil, the drudgery and in fact the servitude to the machine that the mill workman has to endure impose such a severe strain even on his physical condition

216 HAND SPINNING AND HAND WEAVING

that he becomes a wreck very soon. There is no escaping the tyranny of the machine, the din and noise of the factory. By patient social work much can be done to relieve the suffering of the mill labourer who is not at present properly housed but put in dark and insufferable lodging places, who does not enjoy free unpolluted air nor association pulling him off the track of drink and other vices. But the very best done in this direction cannot do away with the lasting effects which mill employment leaves on him. The village craftsman and artisan is far more healthy and enjoys better surroundings than his brother, the mill worker. The smaller wage earned by him is more than compensated by the habit of contentment developed in cottage surroundings. The future of the country rests truly with the village artisan. He has to recharge, in Mr. Havell's words, the whole psychological atmosphere of his home with creative energy. The handloom weaver will have to display his marvellous skill in work and design and find free vent for his individuality. There is great hope that this will come to be. The craftsmen of the future years will naturally be fastidious in respect of material which he owns and on which he expends his labour and skill and the more so since he would be personally responsible for the quality of the finished product. Becoming a

free agent in production, he will enrich the national taste and safeguard it against decay. His hands being full of work, he will use his talent to best advantage. Not being cramped in body and soul he will make the citizen of the future and help in the rebuilding of the manhood of the nation. An industry with a new economic and cultural outlook will have been revived and then and not till then will the nation become the nursery of the beautiful and cease to suffer from the twin diseases of "standardised minds and standardised commodities".

CHAPTER IV.

BOYCOTT OF FOREIGN CLOTH THROUGH THE SPINNING WHEEL DISCUSSED.

A true boycott is healthy resistance. It follows the natural law that whatever is hurtful to an individual or a social organism should be discarded and thrown out. It is a time-honoured and long-practised method of self-defence for an oppressed people awakening them to the primary duties and fundamentals of free life. Boycott is not merely prohibitive; it is constructive too. When nations attempt the exclusion of supplies from outside, and try to become self-reliant, perforce, they are compelled by the very force of exclusion they pledge themselves to, to keep off by their own constructive activity unfair competitors and interlopers. When it suited her economic needs England pursued this very same policy of rigorous exclusion. The historian Lecky notes writing of English industrial progress in the 18th century, "scarcely a form of manufacturing industry had ever been practised in England that had not been fortified by restrictions or subsidised by bounties. The extreme narrowness and selfishness of that manufacturing influence which became dominant at the revolution

Two Aspects
of Boycott.

had alienated America, had ruined the rising industry of Ireland, had crushed the Calico manufactures of India, had enforced on the customer at home monopoly prices on almost every article he required". Almost a similar policy was adopted in America during the Great War of Independence. Here again the historian Lecky describes graphically the plans adopted. "The merchants of the chief town entered into agreement to order no more goods from England; cancel all orders given, in some cases even to send no remittances to England in payment of their debts till the Stamp Act was repealed. In order that the Colony might be able to dispense with assistance from England, great efforts were made to promote manufactures; the richest citizens set an example of dressing in old or homespun clothes rather than wear new clothes imported from England; and in order to supply the deficiency in wool, the general agreement was made to abstain from eating lamb". The American colonies and, earlier still, the British nation which practised prohibition and boycott as distinctive and definite policies when the opportunity suited them, were states with free governments and could move the governments of their respective countries to act promptly and quickly. But the India of to-day is not in that happy position. Otherwise her government too

would have encouraged local manufactures in preference to relying on supplies from outside. The nation must now do what its government dare not attempt. If the country is to lift the boycott it has unwittingly imposed so long on the Indian craftsmen and spinner, his skill, his design, his work and ideals and provide him with renewed opportunities for employment, the most imperative need of the hour is a vigorous exclusion of all foreign cloth. A nation that is dependent on another for one of its prime necessities of life, such as clothing, has few chances of development in any direction. It will have before all else to make an effort to put the full force of boycott as a policy before its people. The industrial regeneration of India, as has been well said, is first and last a moral and intellectual problem, not merely a technical one; it must begin and end not with processes and machinery, but in the mind of every man, woman and child. The resolve to be free from dependence on foreign skill and the desire to recreate and regenerate our industries ought to be the spear-points of our agitation.

So then the boycott in India is to be prohibitive and constructive also. Propaganda and the restriction of one's needs to the barest minimum will doubtless assist the boycott; but

the surest means to the end is so to increase production as to make it cover what is now imported from foreign countries and devise means for its disposal in the country. The Indian must supplant the foreign product. This can be attempted by only one of the two agencies functioning efficiently, either the power-driven spindle and loom or the char-kha and handloom. Which of the two is best suited to our purpose? Which will lead us quicker to the goal? This leads us to a consideration of the possibilities of immediate development in either type of industrial organisation. It would be well, however, to take stock of the present position of the imports before discussing ways and means for their substitution by indigenous production. In respect of yarn the imported varieties represent at present only 8% of the total available for consumption in India. The figures for the 10 years from 1912-13 to 22-23 will make the position clear.

	Average 1912-1913 to 1914-1915.	Average 1915-1916- 1917-1918.	Average 1918-1919- 1920-1921.	1921-1922- 1922-1923.	
1. Yarn consumed in India (Millions of lbs.)	541	507	570	669	707
2. Imported yarn. (in Million of lbs.)	45	29	32	57	58
Proportion of 1-2.	8%	5%	5.5%	8%	8%

222 HAND SPINNING AND HAND WEAVING

The imports of yarn have not risen over the pre-war level and have failed to keep pace with the increasing consumption of yarn in the country. Turning from yarn to piece goods we find the position is as follows:—

	Average of 1912-1913- 1914-1915.	Average of 1915-1916- 1917-1918.	Average of 1918-1919- 1920-1921.	1921-1922- 1922-1923.	
1. Imports (quantity in mil- lions of yards.)	2855	1844	1216	1080	1577
2. Total cloth con- sumed in India (in millions of yds.)	4917	3884	3265	3531	4189
Proportion of 1 to 2.	57½%	47%	37½%	30%	37%
3. Value of import in crores of rupees.	50	41	56	60.7.	59.3

Though the quantity of the imports has considerably declined and now constitutes only 37% of the total cloth consumption in India, its total value has not recorded any fall but on the other hand the drain on the resources of the country in the shape of the import bill for cloth is continuing to be as severe as before. This gives us a clue to determining the reasons that have led to the decline of imports in quantity. It is unnecessary to mention them in detail, but they include the educative propaganda done in the country during the last four years of the boycott movement, the preference given to khadi and generally to indigenous production, the

general fall in the consumption of cloth in the country, fluctuating exchanges, and not the least important, the rise in the price of the imported article. Each one of these has been a determining factor in keeping down the quantity of the imports. It may safely be assumed that the imports in quantity will never reach their prewar level, thanks to the healthy propaganda of boycott already carried on in the country. But their total exclusion presupposes either the rapid development of an existing agency or the setting up of a new one which can replace the supply of the 1500 million yards of cloth as also the 50 and odd millions lbs. of yarn now requisitioned from foreign lands.

Before discussing as to what is to be the nature and function of this new agency in the country some objections urged against boycott as a policy may be considered. It has

Some
Objections
to
Boycott.

been suggested that the boycott is a suicidal policy, for it will neither make an impression on England nor foster the growth of indigenous manufacture. A nation which incurred a debt of 8000 million pounds in the war, says Mr. Kale, can certainly bear a loss of 40 million pounds a year. This is a shallow argument. Apart from the political effects of a boycott on England, her commercial losses, if only a successful exclusion of foreign

cloth took place in India, would be staggering. Once the key industry of Britain receives a set-back, it will react on the whole strength of her industrial system, on her banking, credit and trade facilities, shipping and the business at the ports etc. Writers like Lord Pentland estimated British losses in the event of an Indian boycott at over £ 80,000,000. It is not the loss of a few million pounds a year that would matter; it is the loss of the world's biggest market for cotton goods which Britain would never willingly give up. Mr. Kale's assumption that the boycott will stimulate not much of indigenous manufacture is unwarranted. It is the merit of a policy of exclusion that by reason of its pressure it compels the development and exploitation of productive resources in the country. That it cannot be achieved at all may conceivably be an argument against it. This is what a writer like Mr. Coubrough urges when he says that as 75% of the imported goods are non-competitive the boycott is not a practical proposition.* But the answer to

* Mr. Coubrough also argues that the boycott will indirectly help the mill-owners to profiteer in the country. It is hard to believe that the mill-owners will show mere cupidity and refuse to assist in the boycott. They too have a vital interest in the country and above all in their own industry and will not let go a valuable opportunity to capture more of the cloth market than is available to them at present by aiming solely at profits. Further there will be as a result of the boycott a fairly large volume of charkha production, growing year by year, which will keep the price level of the mills fairly in check.

this is obvious, that the change in national taste which must necessarily accompany the boycott will automatically remove much of this difficulty. Once the mind of the nation is made up, even "non-competitive types" will fall within the range of competition. That Lancashire products are different from those which the Indian mill and hand-loom produce does not imply that unless a similar class of goods is made in India, the former cannot be substituted by the latter. If that were so, not all the combined efforts of the mills and the charkha organisation can do anything to retrieve the situation. One piece of khadi which may only be of 10 counts or even less if it goes to replace the imported cloth must be said to compete with the latter even though that may be of the finest count and of the most superb texture. Mr. Coubrough's warning to the nation that the result of a boycott would be to force down the price of the non-competitive article and thus tend to increase its consumption in the country is entirely based on the fallacious assumption that the non-competitive type will always be immune from the boycott movement. What the boycott prohibits is cloth from foreign countries, both competitive and non-competitive, and what it would encourage and develop is more and more local manufacture.

One obvious suggestion towards effecting the boycott is an indefinite extension of the mill programme. It has been argued many times over that an effective boycott of foreign cloth can be brought about by allowing the mills in the country to develop their existing productive capacity. The possibilities of mill expansion have already been noticed at length and it is only necessary to reiterate the conclusion that it is by no means possible for the mill industry so to develop within any reasonable period of time, say five or even ten years, as to render the nation self-sufficient in the matter of its clothing. But the mills will and ought to help very much. Their production has risen from 1103 million yards in 1913 to 1794 million yards in 1923, an improvement of nearly 50% in ten years. They may continue to add to their production or at least keep their production at the same high level as it now stands. The mills, besides doing this, can help very much by not raising prices during the continuance of the boycott. They would have rendered their account by the nation if they will keep down their price levels and not merely look to profits but to the large national interest that is now at stake. If the mills cannot by themselves bring about the boycott, then the development of some other agency alongside of the mills must be thought

of to bring about the much-wished-for consummation, the exclusion of all foreign cloth from the land. This agency can only be the charkha and the hand-loom.* The possibilities of hand-spinning have been noticed in general already but we have got to examine in detail the extent to which the charkha will have to be developed as a factor in our industrial life in order to bring about an effective boycott of foreign cloth. The present imports represent somewhere about 1500 million yards of cloth and nearly 60 million lbs. of yarn which when converted into cloth will probably make an additional 300 million yards*. To get ready these 1800 million yards the country would need a hand-loom strength of about 15 lakhs, if we take the average out-turn per loom at 1200 yards per year. And the charkhas needed to furnish the necessary quantity of yarn would

* The handlooms are already producing a part of the country's clothing requirements. But almost all of them are on foreign or mill yarn. The increasing production of handlooms has been a feature all these years from 1915.

HAND-LOOM PRODUCTION IN MILLIONS OF YDS.

1915-16 to 17-18	1918-19 to 20-21.	1921-22	1922-23
723	723	944	1103

* The imported yarn being of fine count the average of conversion into cloth is taken at five yards to the pound.

be nearly 100 lacs.* The available numbers of charkhas and looms for work in the country point to great possibilities. But the question is how to work them so as to give us the desired result. A plan of action to get the productive power of the nation in the villages into full working will have to be put forward and followed persistently.

The restriction of one's clothing needs to the barest minimum during the period of the boycott will help considerably to further the national objective. The problem of boycott becomes less difficult to deal with when those who can afford luxurious costumes come to discard them and accept the higher patriotism of restraint. The process of denationalisation present already in the upper classes and fast spreading even to the upper middle classes needs to be peremptorily stopped. The introduction of khadi has already effected to some extent this change towards greater simplicity and less extravagance. But the more the appeal to live a simple life and the avoidance of false standards of comfort come to take effect the progress of khadi will be all the easier. But on the positive side the

* 50 lakhs of charkhas producing 100 lbs. on the average per year will give 500 million pounds or yarn enough for 2000 million yards. If however the charkhas do not work full time but only 4 hours a day on the average, 1 crore of charkhas or one charkha for every 30 men, women and children would be needed to bring about a boycott of foreign cloth.

vast millions of consumers have to be educated to take exclusively to khadi even in preference to other indigenous manufactures. They have also to be educated to eschew foreign cloth completely. Persistent and strenuous agitation will have to be kept going on without break in order to enable the nation to accomplish this object. When a sufficiently organised effort is made in this direction, results have been found to be striking. Every khadi wearer has to assume the role of a propagandist for a time. The nation needs all of them. What is aimed at is a revolution in the national tastes. The markets lost to the lure of fine textures and cheap prices have to be reclaimed to save millions from abject poverty and in the process national tastes will have to be brought back again into line with the higher necessities of national well-being. Production on the char-kha has nowhere suffered but in fact has received an additional stimulus wherever effective and brisk canvassing for local sales has gone on continuously. It has often been urged that we have to take note and avoid erring on the side of over-production. But there is as a matter of fact no such phenomenon as over-production. The demand for khadi is spread all over the country and if sufficient attention is given to the development and utilisation of this existing demand, there would be no such

thing as a crisis caused by over-production. We have now a present market as wide at least as the upper and the middle classes. An effort has to be made immediately to reach this extensive demand. In all prominent cities and in small towns in many provinces where no facilities exist for putting within reach of eager and patriotic consumers the khadi they desire, depots should be opened up and encouraged. A scheme of co-operative purchase in the shape of khaddar chits may be tried widely among the inhabitants of towns. Purchasers may group themselves in twenties and thirties, paying 3 or 4 Rs a month to the khaddar chit which will enable every month, when the chit is regularly subscribed, three or four persons to get clothing for the year, the payment for it being spread over all the twelve months. A year's purchase got at one time with the period of payment spread out through the twelve months would be a boon to the lower and middle classes and to students in general. This kind of group purchase may even be helped by a small rebate on the sale price of khadi. But this would touch the towns mainly where people make cash earnings month to month. But in the villages earnings are seasonal and so too are the purchases. Permanent depots in the rural areas being at present out of the question, an effort has to be made to reach

them through hawkers, and these last may be encouraged either by a system of commissions or by rural bounties. The opening of seasonal fairs and peripatetic stores for the sale of khadi in big pilgrim centres and in other places during occasional festivities will promote sales vigorously.

In trying to capture markets for khadi there is a duty not merely upon the rich town dwellers and the middle classes generally, but also on the spinners and weavers who assist in making up the output. They, however poor, should make an earnest attempt to help in the spread of the movement by themselves putting on khadi.

With a known demand khadi progresses more easily than otherwise. If only the State is willing it can give us the assurance of a steady and continuous demand for part at least of the output by pledging itself to make all its purchases of cloth in khadi. But apart from that even local bodies such as Municipalities, Taluq and District Boards can straightaway popularise khadi in their hospitals, schools and other institutions, and take in a large part of the production.* This would be not

* Several local bodies have already introduced the charkha and the takli into their schools while others have popularised the use of khadi among their staffs. A list of Municipalities and other local bodies helping the spread of the wheel and khadi is given in the A. I. S. A. report recently issued.

mere purchase but so much impressive propaganda secured at no cost.

In organising khadi production there should as far as possible be full concentration in areas where the industry is already in a decentralised condition. When yarn is sold in open market by hand-spinners every facility should be given them to ensure continuous employment. The institution of yarn fairs is the surest means to increase production. Where the spinners are too poor to stock cotton for themselves, cotton must be bought and stocked during the proper season and at a place as near the spinning centres as possible. But even here a vigorous propaganda has to be carried on in order to prevail upon the spinner to keep his own cotton. In fact the aim ought to be to reduce or rather to exalt the cotton crop to the level of a food crop. But this is not all. The spinner has also to be educated into economising the use of cotton and thus putting it to the best purpose. It is here that the importance is seen of a training necessary to all khadi workers in the arts of mending or making the charkha and its accessories, of carding cotton and even of weaving. It is only through such trained workers, that the production of khadi can be placed on sound foundations. Alongside of large-scale production, self or voluntary spinning should be

How to
Keep up
Production.

assisted at every turn. It often passes unrealised, how, for instance, even one charkha in a family of five kept going for a few hours in the day will help in making the home self-sufficient. The figures given below will be found interesting in this connection. (a) 5 persons in a family would require about 80 sq. yards a year or $6\frac{1}{2}$ sq. yards and more a month. (b) To make $6\frac{1}{2}$ sq. yards of cloth about $1\frac{3}{4}$ lbs. of yarn would be required. (c) one charkha working two hours a day will produce in the month $1\frac{3}{4}$ lbs. of yarn of 15 counts enough to give the necessary 6 sq. yards. It is thus easy for families and still more so for individuals, if only they will develop the will, to get themselves supplied with clothing out of their own labour. Individual spinning should be insisted upon even if it were merely to revive and foster hand-spun weaving. What has been said of self-spinning is also true of collective spinning. Spinning clubs in towns may be helpful in popularising spinning in these forms.* It is the popularisation of such spinning that will restore the industry to its old and pristine condition where the producer was also the consumer and neither middleman nor capital was requisitioned to the aid of textile

* An ideal spinning club may have twenty members. It will have one carder and general assistant who is to look after the carding, hanking and preservation of yarn.

manufacture. The economies of home spinning once they come to be known and appreciated are always eagerly sought after and preserved. It was the indolence of the people that lost the art of spinning but it ought no longer to be allowed to obscure the advantages of home-spinning.

The creation of an up-to date controlling organisation to help the movement

Conclusion. by collecting funds, by advancing loans, by devising a system of timely relief and pledges, by collecting statistics and disseminating expert knowledge through workers knowing at first-hand conditions in the rural areas, such an organisation may have at first even to be centralised but when the industry expands, it will slowly abdicate one function after another till the need for its very existence comes to an end. Under ideal conditions khadi would be local manufacture and yet an universal one in the sense that spinners and weavers, farmers and cotton merchants, will meet together directly without the intervention of any middlemen and export would practically be regulated by the rising or diminishing needs of the nearest local markets and will consist mostly only of specialities. This no doubt is a long way off but ought to be the goal of all efforts from now. It is this that will restore to hand-spinning its incredible simplicity. It is only

then that the poor will be relieved of their suffering and being fully occupied will also be able to add materially to the wealth of the nation. The productive power of the country that had long been unused will be worked to the fullest advantage. The agriculturist who will also be the spinner will come to regard cotton as valuable as food itself and be persuaded not merely as to the profits of a prolific crop but also to the quality of cotton which, when spun, should give him sufficiently cheap and durable clothing. India will then be not the cotton farm in which shape Englishmen and other foreigners now see it but the proud country with an art and industry revived in all its full glory. A change in the tastes of the people brought about by the rigorous continuance of a boycott, coupled with the development of a sure organisation with the help of which the Indian home will be enabled to shake off its lethargy and take its rightful place in the country's emancipation, will make India not the magnificent customer that Great Britain expects her to be but the contented self-sufficient country of marvellous industry and production, sighing neither for power nor for gold, knowing nothing of greed, or ambition or aggrandizement, a shining example of courage and perseverance, successful in the mission sought after.

INDEX

- Amalsad Mr. cited 175
Arrian on cotton 17
Aristobolus on cotton 14
Arthasastra, Spinning regulations 9 to 12
Barbosa quoted 19, 20
Baines, Dr. quoted 96
Bernier quoted 20
Bolts, "Considerations" 56
 „ corruption of E.I. Company 61, 62
 „ oppression of weavers 65 to 67
Boycott of Foreign Cloth Considered 218 to 234
Buchanan Dr. Survey of North and South India 70 to 79
Burke, Edmund quoted 121
Calvert Mr. quoted 137
Carder When Born 26
Caesar Frederic quoted 20
Cotton and Food Prices 119
Coubrough on Boycott 224, 225
Cultivation and Acreage in India 133 to 135
Dadabhai Noaraji 129
Defoe, Daniel quoted 50, 51
Duties on Khadi 1800 to 1812. 82 to 84
 „ on Indian goods 1857. 98
Edward MacLaghlan, Sir, quoted 151
Edye (Census Officer U. P) quoted 135
Elphinstone, Montstuart quoted 21
Estimates of Indian Incomes 130, 131
Forbes Watson, Dr. quoted 35, 37
 „ Survey of 100 to 106
"Gangetika" for Muslins 13
Hand-Spinning and Hand-Spun Cloth
 „ in ancient times 1 to 12
 „ Buchanan's Survey 70 to 77
 „ Duties on in 18th century 82 to 86
 „ Exactions of Toll-house 90 to 92
 „ Forbes Watson's Survey 100 to 106

Hand-Spinning and Mutarfa tax on 93, 94

- „ oppression of weavers in 18th century 58 to 62
- „ as poor law 12
- „ Prohibited in England 51
- „ Trade in 1657 60 44
 - „ 1673 83 48
 - „ 18th century 52 to 54
 - „ 1800-1805 68, 69
 - „ 1813 1833 88, 89
 - „ 1870 in Bombay 109
 - „ 1870 in C.P. 106
 - „ 1870 in Bengal 110

Hand-Spinning and the Charkha

- „ Advantages of 154 to 155
- „ Boycott through the charkha 226 to 234
- „ Bounties for 185 to 189
- „ Decentralised condition. 133 to 135
- „ Extension of Agriculture 148
- „ Fine and medium counts 171 to 174
- „ Help rendered by 142, 143
- „ Mills compared with 196 to 216
- „ Objections to considered 127, 153, 155
- „ Possibilities of 158, 159
- „ Remunerative or not 152
- „ Spurious khadi considered 192
- „ Voluntary spinning 184

Handloom Industry

Decline in Madras 111 to 113

No of looms in India and Production on 160, 233

Herodotus on cotton 13

Houghton (Census Officer C.P.) 136

Kale, Prof. on Spinning 152

„ on Boycott 223, 224

Lecky on Indian trade with England 49

„ on Boycott 219

Linschoten quoted 20

Mann, Harold Dr. quoted 135

Macaulay quoted 49, 57

Manu, on Spinning 12

Marco-Polo quoted 19

Milburne's Oriental Commerce, reference to 79

Moreland, Dr. on trade in 16th century 23, 24

Mill Industry in India

- „ Boycott and the Mills 226
- „ Comparison with hand-spinning 196 to 219
- „ Costs compared 207 to 216
- „ Future of 202, 203
- „ Progress of Mills 197

Muslins of Dacca 13, 28 to 42

- „ Cotton for 30
- „ Figures of output 34
- „ Names of 37
- „ Spinning apparatus for 32 to 34
- „ Dr. Taylor on 29, 31, 41
- „ Trade in 39, 40
- „ Superiority of 35, 36

Muslins of Chanderi and Arni 104, 105

Nearchus on cotton 14

Nicolo Conti quoted 20

Occupational Census of India 144 to 146

Orme on Spinning 69

Periplus on Indian cottons 17

Pliny on Muslins 18

Pyrard quoted 20, 24, 25, 28

Railways, effect on cloth trade 117, 118

- „ Cornwell quoted 118

- „ Chapman quoted 117

Rigveda, references to 4, 5, 6

Rivett Carnac quoted 106, 107

Sayce, Dr. quoted 13

“Sindhu” for Muslin 13

Sukraniti, reference to 11

Tavernier quoted 21, 29

Thompson (Bengal Census Officer) 135, 136, 139

Trade Routes in Ancient India 15, 16

Dr Ure on Muslins 29

Vatsyayana, reference to 8

Vedas, Spinning in 3, 5

- „ Dress in 7

- „ weaving in 3, 5, 6

Wilson's History quoted 85, 121

लाल बहादुर शास्त्री राष्ट्रीय प्रशासन अकादमी, पुस्तकालय
Lal Bahadur Shastri National Academy of Administration, Library

मसुरी
MUSSOORIE.

यह पुस्तक निम्नांकित तारीख तक वापिस करनी है।

This book is to be returned on the date last stamped.

[illegible]

746.1
01

अवाप्ति संख्या 111377

Acc No. ~~5623~~

वर्ग संख्या

पुस्तक संख्या

Class No.

Book No.

लेखक

Author

शीर्षक

Title

746.1

Pun

LIBRARY

LAL BAHADUR SHASTRI

National Academy of Administration

MUSSOORIE

Accession No. ~~5623~~ 111377

1. Books are issued for 15 days only but may have to be recalled earlier if urgently required.
2. An over-due charge of 25 Paise per day per volume will be charged.
3. Books may be renewed on request, at the discretion of the Librarian.
4. Periodicals, Rare and Reference books may not be issued and may be consulted only in the Library.